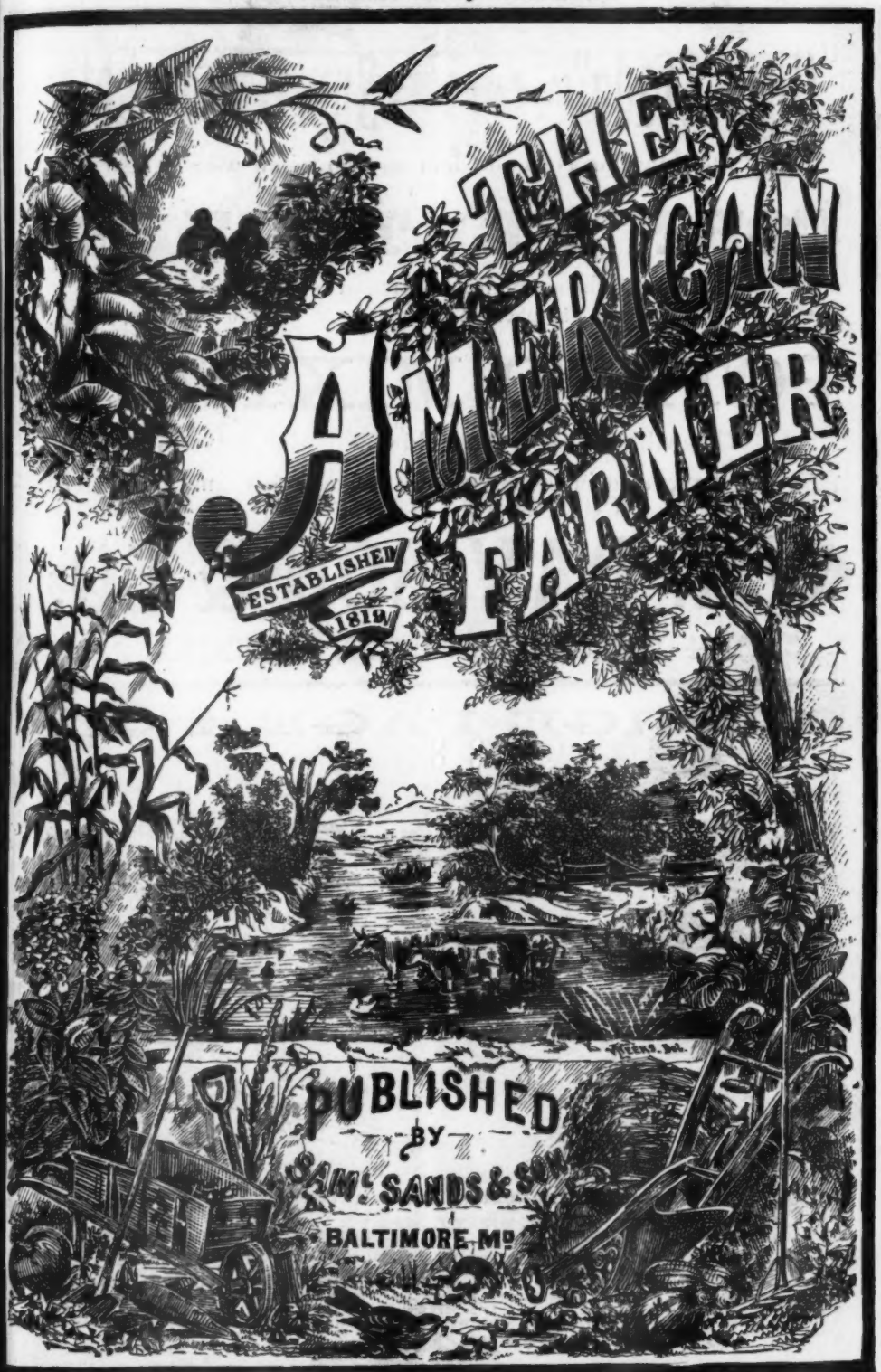


Office, No. 128 W. Baltimore St., Baltimore, nearly opposite American and Sun Buildings.

Subscription, $1.50 a year.
To Clubs of five, 1.00 a year.

"High Grade" Ammoniated Super-Phosphate.

Just the thing for Tobacco Planters who follow with Wheat.

CORN FERTILIZER.

A first-class article for corn, at a low price.

10 to 13 per cent. available Phosphoric Acid. 2½ to 3 per cent. Potash.

POTATO MIXTURE

This will produce a fine yield of superior Potatoes.

☞ We have also in stock and to arrive a full line of AGRICULTURAL CHEMICALS.

WM. DAVISON & CO.

104 W. LOMBARD STREET, BALTIMORE.

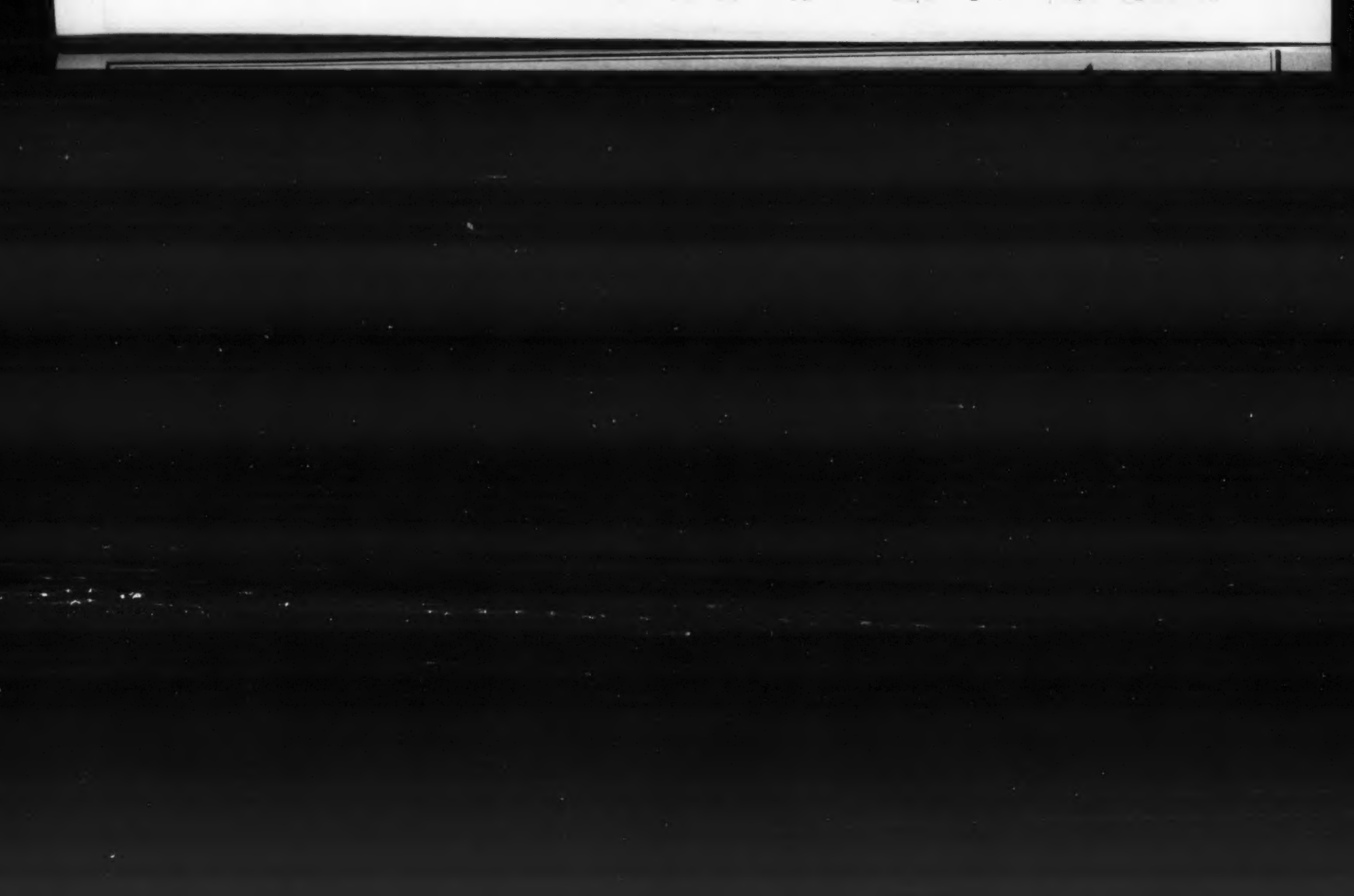
GEORGE PAGE & CO.

No. 5, N. SCHROEDER STREET, BALTIMORE, MD.

Manufacturers of PATENT PORTABLE STEAM ENGINES,

The Boilers the Safest and Most Economical of Fuel Made.

Stationary Steam Engines and Boilers, Patent Portable Circular Saw Mills, Sash, Muley and Gang Saw Mills, Flour Mill Machinery, Grist Mills, Shafting, Pulleys, &c. &c. ☞ AGRICULTURAL ENGINES A SPECIALTY. Lath, Shingle and Barrel Machinery, Leffel Turbine Water Wheels, Wood Working Machinery, all kinds; Tanite Emery Wheels and Grinders, Circular Saws, Saw Gummers and Tools and Mill Supplies Generally. Agents for NICOLS, SHEPHARD & CO.'S VIBRATOR THRESHING MACHINES. ☞ COMPLETE THRESHING OUTFITS FURNISHED. ☞ Send for Descriptive Catalogue and Reduced Price-List.



THE

AMERICAN FARMER.

"O FORTUNATOS NIMIUM SUA SI BONA NORINT
"AGRICOLAS." . . . . . *Virg.*

PUBLISHED BY SAML. SANDS & SON, BALTIMORE, MD.

VOL. IX.—No. 4.] APRIL, 1880. [NEW SERIES.

Reclaiming Sedge and Pine Lands.

Messrs. Editors American Farmer:

I give for the benefit of readers of the *Farmer* my success in reclaiming worn-out sedge or pine land; and I will say that I have several times thought of doing so, but hesitated because I was afraid I had nothing new or valuable to impart. Yet, as facts are more convincing than theory, perhaps some one of your many readers may be encouraged by the statement of what I have done.

Coming into possession of a tract of 162 acres of poor land, covered with sedge and pines, and being criticised severely by some of my friends for undertaking such a hopeless task, I determined to show them what could be done with it, and that without more outlay of capital than I was getting a fair interest for.

A portion where the pines were not very thick was cleared off, and a field of 22 acres enclosed. Commenced plowing the fall of '76, though I did not get much done until the following spring. When 18 acres were plowed, or rather plowed at, it being a very difficult job with the roots and stones to do even fair work, 10 acres was planted in corn, with about 125 lbs. of guano and plaster applied in the hill, and the crop was 27 brls. of nubbins. The remainder of the land plowed was prepared the same as for corn, but left so, except two acres sown in buckwheat, with a heavy dressing of fine bone, the crop from which was a fair one, but, as will be seen further on, not a very profitable one for the land. The land was all prepared for wheat by using the double-shovel plow and harrow, except about an acre that was cross-plowed as an experiment. The wheat was drilled in with 200 lbs. of bone ash and 200 lbs. of 6 per cent. Peruvian guano and 100 lbs. plaster to the acre.

Though looking well until nearly harvest, the yield was but 10 bus. to the acre, the part of the field that was plowed and left so without any crop having apparently twice as much wheat on it as that where the corn and buckwheat were grown, and the cross-plowed part was the poorest of all. Your readers will think this is not a very encouraging showing, and neither is it so far; but without an abundance of capital it is wise to make haste slowly with this kind of land. There was about one quart of timothy seed sown to the acre with the drill, and the following spring one gallon of clover seed per acre. The latter part of July, '78, being unusually wet, the young clover was forced on so that it headed out all over the field, and in August looked like a clover instead of a stubble field. It was pastured until moderately late in the fall, and the next spring left until in head, when 25 head of cattle were turned on to help themselves and trample it down. The growth was so luxuriant, and the cattle had made so little impression, that 16 days after they had been running over it 7 or 8 acres were mowed with the machine, and, though it could not be cut down, made at least half a ton to the acre. I would have preferred turning it right under for wheat, but, having enough wheat land without it, had to leave it to go in corn this spring. It was plowed in January, and it was here that the clover roots two feet long, mentioned by N. E D. in the report of the Enterprise Club, were produced.

Another field of 21 acres of the same land, cleared a year later, with 12 acres put in corn that made 4 brls. to the acre, and the balance plowed in the spring, but no crop raised until wheat, averaged over 20 bushels to the acre with an application of 400 lbs. of 6 per cent. guano and 100 of plaster. There was a decided difference again in favor of the wheat crop where no corn was raised. There is a fine set of clover, though not equal to the year before, owing to the severe drouth after harvest, and perhaps also because there was no bone used on the wheat. To sum up my experience with this kind of land, I think it is much better to plow in the fall or spring and let lay until towards fall, then shovel, harrow and repeat the operation until in good order to drill to wheat, using equal parts of bone and guano, and about 100 lbs. of plaster to the acre.

After a growth of clover is obtained do not let it remain until run out, but turn under, and, with another liberal dressing of bone, set it back to clover, and the "old field" will be permanently improved, with very little, if any, more expense than the crop has paid for. R. B. FARQUHAR.

Rock Spring, Montgomery Co., Md.

The Making, Saving and Application of Barn-Yard Manure.

Messrs. Editors American Farmer:

That the stock of barn-yard manure can be increased very much on every farm, we all admit; and it is lamentable how small a portion of the farming community give to the making of manure the attention it deserves, especially when we reflect that manure is the farmer's most unquestioned source of wealth.

Many farmers seem to have an utter disregard for the manure pile, or for the saving of the manure they have on hand. On some farms we find the manure just pitched out on the side of the stable, under the drip of ths eaves, with scarcely room enough left for stock to move through in going in and out. In other yards we find the manure scattered around in irregular heaps, wherever it may chance to be deposited by careless hands. In other yards the grade from the stable-door descends, say 1 foot in every 3 or 4, and, of course, when rain falls, or snow melts, the best of the manure runs away to the nearest water-course and passes forever beyond the farmer's control. In many other yards the manure is scattered all over them, presenting a large surface for the rain and snow to fall on and wash away the substance of the manure, and also presenting a larger surface for evaporation.

My plan is to keep the manure in a pile, knowing by past experience about the size to begin the base in the fall of the year. I build on that until the next summer. The manure, which is put on daily, is carefully spread over the pile, not allowing any to remain in the smallest heap or bunch, as left by the wheelbarrow,—since, in this state, firing soon ensues.

The pile at the base is large enough to admit of its being drawn in like a stack; thus the water that falls on the sides is shed, as the latter are kept as even and smooth as they would be in a stack. The rain and snow that falls on the top of the pile affords on the average about what moisture is required for a proper state of fermentation.

A certain amount of packing is almost essential to the preservation of the manure in the pile in its best state. As I cart manure from the horse-stables and hog-pen, as well as from other sources, and also dry earth on the pile, I secure the desired compacting in this way, assisted, too, by the tramping of the stock.

A pile treated in the manner here described will keep all summer without over-fermenting or losing any of its valuable properties.

Plaster is scattered over the pile liberally two or three times a week, or according to the amount of manure added.

When I expect to keep manure over summer, I am particularly careful to adulterate the heap with a large percentage of dry earth and scrapings from the road washes. I look on these ingredients as of very decided advantage to the pile.

It has been my habit to keep the greater portion of my manure for wheat. I apply it on the surface and harrow in. I have been getting good sets of grass from manure used in this way.

Baltimore Co. D. GORSUCH.

Soils—Their Origin, Characteristics and Treatment.

Granite must be the primary source of all rocks. This conclusion follows from the fact that granite, everywhere, is the crust of the earth, and, although covered in many, indeed in most places, by subsequent formations, the materials of these deposits must have come from the granite. In the Devonian or limestone rocks, although they are probably the cast-off shells of marine insects and animals, yet they must have procured the lime from the granite which the waters in which they lived had dissolved out of the granite and held in solution. I recur to this subject because in treating of soils I would like to prove that the character of the rock determines the soil; indeed a rough analysis of the soil can generally be made by observing the nature of the surface rocks; then, if you know the minerals of which they are composed, you can generally guess the peculiarities of the soil. This rule, however, is not without exceptions, because, in some places, the drift of ancient oceans has removed materials far from their original sites, has separated the sand and the clay, and deposited them in beds one over the other. In the glacial or ice period, a space of time in the world's history in which its surface, from causes not well understood, seems to have been pretty well covered with ice, materials frozen to the bottom of icebergs were transported a great ways down slopes and deposited where the ice melted, covering the original soil many feet deep with this drift, just as occurs in the avalanches of Switzerland at the present time. I guess there is no country in the world where the fact that the rock determines the character of the soil is better demonstrated than in our own neighborhood. In fact, the members of this grange might be classified by the rocks on their farms. Some come from the primary limestone that fills our valleys, others from the trap formation (vulgarly, negro-heads) south of us; others again from the granite which crosses our turnpike from St. Mark's on the Hill church, to Suter's Hill; and still others from the mica schist beyond; while interspersed here and there are small tracts of chlorite and talcose slate—not, I believe, represented. Ah! there were fearful times about these regions when the earth was young and the greater part of the continent covered by the primeval ocean. The granite tract was sleeping quietly beneath the waters, being gradually covered with a layer of flint slate and gneiss; but its slumber was of short duration, for the layers are very thin, when the pent-up forces below asserted their power, put sea and land in commotion, and, with the terrible bellowings of the earthquake, the huge masses of granite were thrust up from the depth of the ocean, bursting through the layers of slate, turning them from a horizontal nearly to a vertical position, and pushing between them so far as to break the earth's crust on the south side, and through these chasms the seething mas of black lava which now forms our negro heads or trap was poured. It must indeed have been a terrible scene if there had been eyes to witness it. There were none, however; for

there is not a single trace of animal or vegetable life to mark the period. It was warm in those days about here,—for along each line of fracture the flints were melted and turned into scoriæ, like the slag of an iron furnace. If age is any mark of respectability, then should the Alleghanies bow down and do homage to our neighborhood, for at this time they were reposing at a depth of 20,000 or 30,000 feet below the surface of the ocean. I have picked up in the tertiary, 15 miles below Annapolis, indurated marls containing impressions of Pupa Vetusta, a shell fish which lived during the coal formations of the Alleghanies, as proved by their remains in the coal. We were above the ocean two long geological periods before this animal came into existence. After this first upheaval our condition was that of a low granite island in the midst of a wide ocean, and probably not much above its surface, and our valleys were quiet coves, in whose still waters the primary limestone was deposited in horizontal layers, which layers were broken and displaced in the general rise which took place millions of years afterwards; probably when our *parvenu* neighbors the Alleghanies were upheaved. But this is a digression. Pardon me for trying to show you your own neighborhood as I see it, and we will turn again to our subject.

Granite is composed of flint, feldspar and mica, the composition of the rock varying much by the unequal mixture of these materials, the flint sometimes predominating, sometimes the feldspar, and, again, the mica; the latter ingredient being sometimes displaced by hornblende, or mingled with it. With a microscope you may see all these ingredients in a piece of the finest-grained granite; but here is a specimen I picked up on a stone heap, the composition of which is so coarse that you may easily see them with the eye. If we analyze these minerals, we shall find their composition as follows. To avoid technical terms, I shall call silica, sand, and alumina, clay: then we have in the *feldspar*, sand, 64 per cent.; clay, 20 per cent.; potash, 14 per cent.; lime, 2 per cent. *Mica, Black.*—Sand, 42 per cent.; clay, 11; magnesia, 9; potash, 10; iron protox, 22. *Common Mica.*—Sand, 46 per cent; clay, 14; potash, 4; iron ox., 17. *Hornblende.*—Sand, 43 per cent.; clay, 12; lime, 10; magnesia, 13; protoxid. iron, 18.

Now in the granite track that I have spoken of, we have all these ingredients, though the hornblende is in very small quantities; but you observe that we abound in potash: 14 per cent. in the feldspar, and 10 per cent. in the black mica, of which we have a large quantity, and 4 per cent. in the common mica; while the sand and clay are well proportioned for a light loam, not clay enough for the heaviest crops of wheat, but excellent for corn.

The chief mineral deficiency of this granite soil is lime, of which we have only 2 per cent., and this ought to be constantly applied. Its recuperative powers are very great, in consequence of the large per cent. of potash in the feldspar, whose gradual decay under the sod keeps up and renews the supply.

In the mica schist land north of Suter's Hill, we have sand, 46; clay, 14; potash, 4 to 10 per cent.; iron, 17 to 22 per cent., according as the common or black mica predominates. The potash is soon exhausted; of lime, there is still less than in the granite soil. But everything is iron; the flintstones are dyed with it, and immense deposits of it are occasionally found. Lime and ashes, or kainit, are the minerals needed.

In the blackstone or lava tract, hornblende is the predominating mineral, and in it we have sand, 43; clay, 12; magnesia, 13; lime, 10; proxide of iron, 18. There is also in the rock some mica which will give a small percentage of potash. We have in this rock a plenty of lime, too much magnesia, and a great deal of iron. In fertilizers you need everything but lime; while the large amount of magnesia combined with the clay renders the soil sticky, and, unless great attention is paid in cultivation, it becomes cloddy in summer, the compactness of the magnesia excluding the air. A large amount of carbonaceous matter added to the soil would tend to prevent this; hence stable manure is much better for its permanent improvement than the same amount of manure in artificial fertilizers.

To the owners of the *limestone* valleys I would say yours is an exception to the rule; your rocks *do not usually* represent your soil. Subsequent to the deposition of the limestone, they were covered by another soil from a different locality, or the wash from the neighboring hills, and the lime you have so conveniently will benefit your farms if burnt and applied. It is probable that the super-phosphates would benefit all these lands, because phosphorus is everywhere a scarce mineral, and chemists rarely detect it in the analysis of 100 or even 1,000 grains, and, even when stable manure is applied, the waste of its liquid portion which contains the larger share of the phosphoric acid tends to make it scarcer still. There is but one mineral that I know of which contains phosphorus, and that is scientifically called apatite. It occurs in small veins, or crystals, in the primary rocks,—chiefly in serpentine. Bare Hill, in Baltimore county, is set down as one locality in which it occurs. I once searched for it diligently in that locality, among the serpentine of which there is plenty, but failed to find the apatite.

It is not, however, sufficient for a soil to contain the mineral ingredients which I have mentioned. To entitle it to rank among the best, there should be a proper admixture of sand and clay and carbonaceous matter, the result of decaying vegetation. We seldom find these ingredients mixed just as the judicious farmer would wish them. Sometimes there is too much sand, or the sand is too coarse, and the rains percolating rapidly through leach out the soluble manures. Again, it is so fine that it becomes compacted in dry seasons into a species of brick, and when wet it becomes like putty or runny, in either condition admitting no air. This is frequently called pipe-clay soil, though it seldom contains more than 5 per cent. of clay. Samples of this soil may be found along our bay shores, covered with white oaks; and as their roots do not find a genial subsoil, one permeable to air, they run along the surface, thus furnishing fine timber for ship's knees, ribs, &c. In

fact you can give a pretty good guess of the quality of the soil by observing whether the circumference of a tree is the same at the surface that it is three or four feet above the ground. The philosophy of all this is that when nature plants a tree, she makes provision for its nourishment in the fall and decay of its annual crop of leaves; and if the roots of the tree find the soil uncongenial, they spread over the surface where the nourishment is to be found.

These pipe-clay soils are the hardest of all sandy soils to manage. If you ditch them, your ditches fill up because the soil when wet becomes different, and though not soluble in water, it is suspended in it and washes away, the banks fall in, and if you clean them out the next rain will make it necessary to repeat the process. Plough them in the fall in order that the winter frosts may mellow them; a few rains wash all your furrows into a solid mass, squeezes out the last bubble of air they contain, and the spring finds your fields just as dead and solid as it was in the fall before it was ploughed.

Some clays containing a large percentage of magnesia work in the same way. The best way to meet all these difficulties would be to cover the surface with 4 or 5 inches of coarse, gravelly soil and plow under, mixing well with the soil; then drain with tile, throw into beds with the plow, and clean out the dead furrow; sow with anything it will bring and plow under. When you get it filled with vegetable matter, it will bring you good crops of wheat. If, however, you have much of this soil on your farm, the best advice I can give you is to sell it and move elsewhere; there is plenty of good land for sale cheap in the State. Or, if you cannot do better, follow Greely's advice: "Young man, *Go West.*"

Clay soils are usually not difficult to manage. Underdrain thoroughly; let out the water, the air will take its place, the stiffer the clay the closer the drains; plow in the fall, the frost will pulverize; manure freely with stable manure, and you cannot fail to have a productive and permanent soil. It matters not how sandy your soil is if you have a bed of clay within a few feet of the surface; you can easily improve it, because the clay prevents the leaking. I never had much faith in the chemical analysis of soils. You must all know how difficult it would be to select 100 or even 1,000 grains from the varied soils of your fields that would be a proper sample of the whole. The farmer himself, however, without the aid of the chemist, may easily find out some prominent facts to assist his judgment, and guide his practice by the following methods:

1. *Its capacity for moisture.*—Weigh 1,000 grains sample, when the land is just in condition to work: neither too wet nor too dry. Then put the sample near the stove and dry out; weigh again, (the difference of weight is its capacity for moisture.) 2. *Amount of carbonaceous matter.*—Weigh 100 grains of this dried soil, and put in a vessel that will stand the fire; raise to a red heat, and burn off the carbon; weigh the remainder, (the difference in weight will be the amount of vegetable matter.) 3. *Amount of Clay.*—Weigh 1,000 grains of the dried soil, put in a tumbler of water, and stir thoroughly. After the sand subsides pour off the clay; repeat the washing until the clay is all removed; then dry again and weigh, (the difference in weight will be the amount of clay.) Examine sand left with the microscope for particles of feldspar, mica, hornblende, &c.

Lastly, to find out which manure will pay you best, make ribbon beds of equal size across your fields; stake and mark them so that you will always know them. Leave each alternate strip without any application, and mark them all No. 1. On No. 2 apply 50 bushels of lime per acre; on No. 4, 100 lbs. of potash; to No. 6, 200 lbs. superphosphate. No. 8, 100 lbs. sulphate of ammonia, (nitrogenous.) On No. 10, 200 lbs. of Peruvian guano, (a perfect manure.) No. 12, an amount of stable manure containing the same amount of soluble ingredients of the same kind as the guano.

Cut the crops, keeping all separate, and weigh all above the grouud; and compare each manured ribbon with the unmanured alongside of it, and note which gives the greatest yield; that is the manure in which your land is most deficient, and that will pay you best to appiy.

Now note the difference between the ribbons manured with guano and stable manure, and you will learn whether your land would be improved by additional vegetable matter. Further study will convince you that this ribbon-bed system is one of extensive application; and the careful farmer, by inspecting and noting the facts, and weighing the products for two years, may test the lasting properties of his manures, and find out many other useful things concerning his farming operations. For instance, to test the question, I see now discussed in the agricultural journals whether a superphosphate will benefit recently limed land; he has only to lime one ribbon, leave a ribbon unlimed, and apply the superphosphate to both, leaving a ribbon undressed in the middle. Weigh each separately, and note the result, and he will solve the question.

J. T. COUNCILMAN,
Lecturer Garrison Forest Grange.
Baltimore Co., Md., March 2d, 1880.

Beet Sugar.

Mr. Saml. Eccles, Jr., one of the proprietors of the Canton Sugar Refinery in this city, who has been at great trouble in investigating the questions connected with making sugar from the beets, read by invitation at the Farmers' Convention of Baltimore County, February 25th, a paper from which we make the following extracts:

Professor Ware, in his most excellent work on the sugar beet, says: "Of all the articles entering our ports from foreign countries sugar is the most important, not only in its actual value, but its cubical volume: hence for this, if for no other reason, the importance of adopting some plan by means of which the millions that are sent elsewhere for the employment of foreign capital and labor shall remain at home, as a country should grow and manufacture, as far as possible, all products which it consumes." I take it for granted that your sympathies, like my

own, lie with the professor in the views thus so well expressed.

Some idea may be had of the value and proportions of the sugar business of this country when we examine the record of the past year—total consumption 831,896 tons, of which 123,800 tons were produced at home and 708,096 imported. The latter cost in foreign countries about eighty millions of dollars, and when to this is added the duty of about 60 per cent., we have as the total cost of imported raw sugars an amount exceeding one hundred millions of dollars. In a consumption of nearly two billions of pounds we produce less than one-sixth. Our population of fifty millions consumes nearly forty pounds per capita. Forty years ago the consumption per capita was less than half what it now is.

Europe.—Europe consumed last year 1,800,000 tons, of which but 300,000 tons were imported, the remaining 1½ millions of tons being domestic beet sugar,—thus importing but one-sixth of a total consumption of over four billions of pounds.

In 1747 Margraf, a German chemist, discovered the presence of sugar in the "beet," but it was not until 1796 that sugar was practically made from the root in any quantity.

In 1828 but 7,700 tons was produced, and in 1838 the "Popular Encyclopedia," published in Glasgow, in speaking of the manufacture of sugar from beets by the French and Germans, goes on to say "that experiments had tended to prove that sugar can never be advantageously manufactured from the beet upon a large scale,—it yielding, upon a fair average, barely enough to pay expenses." Notwithstanding such opinions from high authorities, the industry has since then progressed in a marvellously rapid manner on the continent of Europe, reaching, in 1853, 200,000 tons; 1863, 452,000; 1867, 650,000; 1872, 1,142,000, and in 1879, 1,574,153 tons. The improved methods of cultivation, great degree of skill and science employed, has doubled the yield of sugar per ton of beets.

California.—Turning to our country, California claims our notice, having for some years past been engaged in developing the Beet Sugar industry.

In the U. S Agricultural Report for 1878 Professor Hilgard, of the State University of California, says: "The Sugar Beet succeeds admirably in a large proportion of the State, and in appropriate locations yields a juice of extraordinary richness; as much as 19 per cent. is clarified in some cases, (but I can vouch for 15 only from personal experience,) and a fair degree of purity. Several prosperous Beet Sugar factories already exist, the failures reported having apparently been due to mismanagement. It is difficult to see why, with such material and the possibility of keeping up the supply for nine months by the planting of successive crops, this industry should not become one of the most important and lucrative in the State, and fully able to compete with any sugar-cane planting that may hereafter be introduced in the southern portion of the coast."

It should also be taken into consideration that California employs high-priced labor and fuel, and has to compete with sugars imported free of duty under the so-called reciprocity treaty with the Sandwich Islands, forty-seven millions of pounds having entered San Francisco last year.

Maine.—In 1877 the State of Maine, through her Legislature, enacted a law authorizing the Governor and Council to "contract with any responsible party or company, to pay said party or company a sum not exceeding one cent per pound on all beet sugars manufactured in the State from beets raised in the State, the amount of bounty so paid not to exceed $7,000 in any one year, and not to exceed ten years from the time of payment of the first bounty."

The Maine Beet Sugar Company was organized some two years ago, and during the winter of 1878-79 manufactured 180,000 pounds of sugar.

Last summer an entire outfit of the most approved machinery was imported from Germany, and refining operations commenced in October.

The results are fully set forth in a report made by a committee who were appointed to look into the transactions of the company by the Maine State Grange, extracts from which I will read to you. I derived much information and great pleasure from visiting these works, the last occasion in the early part of January, when all was in full operation, working 150 tons of beets daily, and employing about 130 hands. Every courtesy was shown by the officers and manager, and too much praise cannot be awarded the gentlemen of Maine Beet Sugar Company for their untiring enterprise.

[Mr. Eccles then read a lengthy paper on the beet sugar industry of Maine, being a report of the committee appointed by the Maine State Grange to investigate the claims of the Maine Beet Sugar Company to the confidence and support of the farmers of Maine.]

Delaware.—Our neighboring State of Delaware is also alive to the interests of her citizens, having created a commission, and appropriated money to enable the commissioners annually to distribute information and seeds, and also to pay premiums for best beet crops in the State.

A company was organized at Wilmington and new works erected, which have been in operation a part of this winter. I understand it is in contemplation to enlarge the factory and fit it with all the necessary machinery for a first-class establishment. Should this be the case a good outlet will be furnished for Maryland as well as Delaware beets next season.

Massachusetts.—Mr. Sparrow, under date of 19th inst., says: "I have ordered all the machinery from the Franklin Company, Mass., and when finished and in operation I hope to be able to show you what a beet factory is and should be." He adds, "ask your people why they don't send to Ireland and the Provinces for their potatoes, Russia for wheat, and to Joseph and his brethren for their corn?"

Carthage, N. Y.—The citizens of Carthage, N. Y., are reported to be preparing to erect and operate a Sugar Beet factory, and several land owners have signified their intention of going into the beet culture.

Experimental crops have been raised in our own State during the past year. Those that

have come to my knowledge have yielded a fair tonnage per acre, with no extraordinary labor or fertilizers. The test was a good average, and good strong sugars was the result from one lot raised by Mr. R. B. McCoy, of Harford county.

Comparative yield of Wheat and Beet.—By referring to the Agricultural Report of 1878 we find the entire wheat acreage of Maryland in that year to have been 491,000, yielding thirteen bushels per acre, a total of 6,383,000 bushels, realizing, at 98c. per bushel, $12.74 per acre, and a total of $6,255,340. The same acreage in beets, at the low average of ten tons per acre, would yield $24,550,000, or $50 per acre, and a total tonnage of 4,910,000. If we add to this the labor and expenses required to convert this weight of beets into raw sugars and molasses the value would be over fifty millions dollars.

The entire acreage of the United States in eight years of 1871 to '78 was twenty-five millions, yielding 12 2-10 bushels per acre, a total of 304 millions of bushels, realizing $1.03 per bushel, or $12.63 per ac' in all 316 millions of dollars. In 1878 the w at acreage of the United States was somewhat ver 32 millions, with an acreage yield of 13 bushels, realizing 78 cents per bushel, or $10.16 per acre, total 326 millions of dollars. One-thirtieth part of this acreage, suitably located, would yield sufficient roots to supply the United States with all the sugars imported last year, and for which we paid, as I have stated, over one hundred millions of dollars. The converting of this amount of beet root into sugar would necessitate the erection of 500 refineries, each of equal capacity to the one at Portland, and would in all give employment during the winter to sixty thousand workmen.

With these facts before you it is unnecessary for me to take up your time further to discuss the other many advantages that would accrue to the farmer, mechanic, scientist, manufacturer and capitalist by the development of this great industry. With millions of uncultivated acres, and a soil and climate suited to every want of man, it seems but to require co-operation on the part of those most directly interested to insure grand results to themselves, the State and Nation.

The Boston American Cultivator of the 20th March gives the names and address of 150 progressive and enterprising farmers, who, last season, by careful and intelligent management, *succeeded in raising an average of nearly twenty tons each of sugar beets to the acre*, for which they averaged a cash return of about $100 each per acre. This record, representing the product of many farmers in different towns and in three States, shows that successful beet culture is not so much a matter of soil or locality as of individual effort and skill. The list as given shows that 150 farmers, cultivating 114½ acres of land, produced 2,186 486-2,240 tons of beets, selling the same to the Maine Beet-Sugar Company of Portland for the sum of $11,444 44.

The name and post-office of each farmer is given in detail in the Cultivator, with the number of acres in cultivation by each, the exact number of tons and pounds of beets harvested and sold, and the specific sum received by each one of them to the cent. So that there can be no doubt of the correctness of the entire statement. The principal number of cultivators was in Maine, but there were also a portion in Massachusetts and New Hampshire, at points convenient, we suppose, to the locality of the Maine factory.

We would here remark that there are in Germany 329 sugar-beet mills. Twelve pounds of beets make one pound of sugar in that country.

Oregon farmers propose to test the practicability of raising the sugar beet. A premium has been offered of $100 for the best acre, and $50 for the second best, that shall be raised in the State.

The Harford Co. (Md.) *Ægis* says that Mr. R. B McCoy, President of the Harford County Beet Sugar A-sociation, has received a letter from Mr. Lea Pusey, managing director of the Delaware Beet Sugar Company, giving the prices which will be paid for sugar beets the coming season. The company is prepared to work up the beets grown upon 1,000 acres. The prices, which are graded according to the percentage of sugar contained in the beets, are as follows:

Below 8 per cent	$3.50	per ton.
From 8 to 9 per cent	4.00	"
" 9 to 10 "	4.50	"
" 10 to 11 "	5.00	"
" 11 to 12 "	5.50	"
" 12 to 13 "	6.00	"
" 13 to 14 "	6.50	"
" 14 per cent. and above	7.00	"

The above prices are paid for the beets delivered at any station on the Philadelphia, Wilmington and Baltimore railroad, the Beet Sugar Company paying the freight. The tons are of 2,240 lbs.

The company desire to know, as soon as possible, the probable number of acres of beets which will be grown in Harford county, in order to make the necessary arrangements for receiving them.

Management of Tobacco in Lancaster Co., Pa.

Mr. J. M. Frantz, who is spoken of as one of the most intelligent and experienced growers of the weed in Lancaster Co., gives the following account to the *New Era* of the general management of the crop as practiced by him:

The culture of tobacco has assumed such proportions as to make it one of, if not, the most important crop, in a monetary point of view, in Lancaster county. It has grown from time to time, in acreage, as well as in quality, until it has attained a reputation in the markets of the country excelled only by that grown in the West Indies and a few other favorite localities

This is the result of that care in its management, through its various stages, which has of late years been practiced and studied by the more careful growers.

With the view of guiding others, not familar with the process, I will endeavor to give a brief outline of the manner of treating the plant through the various stages, from the seed to its preparation for market.

The Plant Bed.—In the first place, the successful grower must raise his plants, and this is by no means the least difficult part of the work. As the seed is small, and the young plant tender, it requires attention corresponding with these conditions. The prime requisite is a piece of ground, *of rich soil*, and protected from cold winds. This should be prepared in the fall, by spading and manuring, and about April 1 sow seed at the rate of a tablespoonful to one hundred square yards. Having previously pulverized the soil thoroughly, then rake it gently, and pat the surface with back of a spade to bring the seed into close contact with the ground. Mixing the seed with, say a peck of wood ashes, will facilitate the sowing of the mixture with regularity.

How to Grow Strong Plants.—A covering of the bed with hog bristles has a wonderful influence in promoting the development of the plant. The bristles may be removed, after the plants have attained a growth of three or four leaves, and preserved for future use, a rake being the best means of removal. Frequent sprinkling is indispensable, as moisture is an active promoter of all vegetable growth. A solution of some active fertilizer applied in liquid form is of great benefit. By careful attention to your plant bed, thorough weeding included, they will be ready for transplanting during the latter half of May in this latitude. From this to say June 5, plant whenever weather and ground are favorable; the same conditions that favor the growth of a cabbage plant will do the same for tobacco, and all farmers should know how to start cabbage.

I have dealt with this part somewhat tediously, but none too much so for the interests of the grower, as his experience will testify to abundantly. Good plants ready in time are half the prospect of a crop attained, and not having your own, and in time, is like expecting to make "bricks without straw."

Preparation of Ground.—The ground cannot be too rich. Barn-yard manure is, beyond dispute, the most preferable, if not the only reliable fertilizer. Gypsum, wood ashes, &c., are good auxiliaries. Sandy loam is preferable to a stiffer soil, and thorough cultivation is absolutely necessary. Without this, a paying crop cannot be expected. Fall plowing, or early spring, is desirable.

Setting Out the Plants.—When ground is thus prepared, say about May 20, it should be ridged in rows, three and a-half or four feet apart, if the ground is very rich. After ridging, cut out indentations to receive the plant, say three and a-half inches on the row, and from twenty-two to thirty inches apart, as experience may dictate, a medium between the two being, perhaps, as good as any—depending, of course, on soil and season. The plants should be set below the general level of the row, as by future hoeing the higher portions will be cut down to a level. All other cultivation should be the same as that for corn or other hoed crops—thorough and frequent. No weeds dare be allowed at any time. In an average season the plant will mature sufficiently by the early part of August to dispense with further cultivation of the ground, as the plants shading it will check the growth of weeds.

When to Top.—Whenever the plant develops from fourteen to sixteen leaves, break off the top; don't cut it off. This arrests the further production of leaves, but will promote the growth of suckers, which will have to be removed, after attaining a length of three or four inches, as they appear.

Enemies to be Guarded Against.—It may be well to refer here to two formidable enemies of the plant, viz: the black cutworm and the green worm. The former will attack the roots of the plant as soon as it is put into the ground. Its depredations sometimes necessitate frequent replanting. They must be hunted and destroyed until they disappear, which they will do as the season advances. The last-named generally appears about July 1, and feeds on the leaf until the crop is secured in the sheds. In fact, they frequently, if not picked off clean, cling to the leaves after the stalk is hung up. About these there is but one advice to give—pick them off and destroy them, going over the field for this purpose daily, and the ravages of the green worm do more to injure the quality, perhaps, than any other thing.

Topping.—Usually, from three to four weeks from the time of topping, the plant will mature and be ready to cut. Uniform size of leaves, and a stiffness of the leaf, making it liable to break by bending and handling, are the surest signs of maturity.

When to Cut It.—Cut after the dew is off, but not during the middle of the day, when the sun is bright, as you must guard against burning while it is undergoing the wilting process, preparatory to spearing and handling in the removal to the shed.

Handling It in the Barn.—When sufficiently wilted, the plan in practice is spearing or stringing upon laths four feet long, five or six plants to each lath, and then, removing the same into sheds, hang up for curing. The distance between the lath, general arrangement thereof, as to ventilation, admission of light, &c., must be attended to. Air and light, having a great influence on the curing and fixing of color, must be used to the best advantage in catering to the tastes of the trade, which, by the way, are subject to frequent changes; sometimes light tobacco is in demand, and again dark only will meet a ready sale. Strange, but true, frequently when we have it dark the buyers want it light, and *vice versa*.

In removing plants to the shed after cutting, various devices are used. Sleds, wagons of various styles, or any way in which you succeed without breaking or bruising the leaf, is a good plan; and the quickest way, with these ends accomplished, is the best.

Stripping.—By the middle of December, and after, whenever the plant is sufficiently pliable by moisture to strip or handle it without injury, you can strip it; assorting leaves is one of the most prominent features in the stripping process. All solid leaves should be kept separate as wrappers, and these sorted into hands of ten or twelve leaves, each hand tied at the but by a single leaf. All leaves in the same hand should be of uniform length. The hands should then be assorted with reference to length into two or

three sizes. All defective leaves should be treated alike and put up separately, the respective qualities being bulked separately ready for market.

Packing.—The packing or casing is generally done by parties buying it from the grower. I would further add, that so much depends upon little details in the management of a tobacco crop, to bring about the best and highest results, that the details cannot be presented intelligibly on paper or even conveyed verbally.

General Remarks.—A personal observation during the season with a practical grower is so highly advantageous, that I regard it as almost indispensable to success. All professions and trades require a course of reading and an apprenticeship. Why should we not devote a season to the acquisition of the information so highly essential to success, and which relieves us of much loss of time and expense in experimenting.

The large quantity of inferior tobacco constantly upon the market is the best evidence of the importance of this feature in the business.

Lancaster Tobacco in Maryland.

Messrs. Editors American Farmer:

In compliance with your request to send you a report of any experiments, &c., I respectfully submit the following:

During February, 1879, being in Lancaster Co., Pa., and hearing of the great success attending the raising of tobacco and the fine prices received for it, I determined to try some of the same seed in old Anne Arundel. My idea was, if possible, to get a tobacco having the same texture, with a better color and more weight than the tobacco I had been planting, known in this section as the "Wilson."

As I was only experimenting, I made but a small plant-bed, which at one time promised well. But the fly got into it and left me, by the time a good season came, only about 50 plants; these I planted in connection with my regular crop, but somewhat to themselves, so as better to be able to watch them. They grew well and ripened early, and were housed a week sooner than any other tobacco planted at the same time; some of the leaves measured 28 inches long and 18 inches wide, and all of it was larger than any tobacco I had ever raised. It cured in good condition, and very regularly; but little second or dull, nearly all a good red.

A few days ago, while in Baltimore, I got the opinions of some of the tobacco-buyers in regard to some sample bundles that I brought with me for that purpose. Much to my gratification they agreed that it was much better than regular Maryland tobacco, having a *better texture*, more size and therefore more weight. As I am fully persuaded it can be made a success, I will this year put in half of my crop of this kind of tobacco; and will further state that I believe it will make a greater number of pounds to the acre and bring more per pound than any other tobacco raised at this time in the State. All it wants is *good land*.

I.

West River, A. A. Co, Md.

Our French Letter.

French Fat-Stock Show.

Messrs. Editors American Farmer:

This year's fat-stock show at the Champs Elysees was looked forward to with much interest, as a test of the alleged agricultural depression. There was a perfect unanimity among farmers, that last year was very bad, but no despair; there was no want of confidence in the approaching season. As the question of free-trade divides French farmers, there was no possibility of any reconciliation being arrived at on the subject of locking out the competing foreigner; but there was no dissension that the government could give substantial relief by reducing, if not abolishing, many home taxes that specially weigh on the agriculturist. The new Director General of the Exhibition introduced several excellent changes in the distribution of the exhibits, by which the animals could be better observed; the pigs for example, and some of the sheep, were no longer lost beneath dark galleries. Preceding shows had more entries, and, perhaps, finer individual specimens, but none certainly were superior on the whole. Two prominent facts were self-evident:—a notable advance in developing the precocity of animals, and a greater reliance on foreign blood to cross native breeds. To gain time in the rearing of stock for the butcher, is equivalent to an increase of production. In perfection of form, quality of flesh and finish of fattening, the younger animals carried off the palm. Specimens of native breeds, in a few instances, equalled Durhams; but to know the practical value of the comparison, it would be necessary to possess the relative cost of feeding. There was a huge Normand ox, aged 34 months and 20 days, that weighed 19½ cwts.—quite a phenomenon. From general observation it is admitted that the more of Durham blood in an animal, the greater will be its fattening superiority over the best pure native breed. The prize of honor was awarded to a Charolais ox, 46 months, and weighing 18½ cwts.; next, to a fat Durham cow, 4 years and 5 months, weight 17½ cwts.; for sheep, three Southdowns, 8½ months old, weight 10½ stones each, were awarded the prize of honor; and the same for a pig, Normand breed, weighed 43 stones, and was registered as only "10 months" old. French judges never control the alleged age of pigs; yet by passing a running knot, attached to a small stick, on the upper jaw, the pig will speedily open the mouth and allow the teeth to be examined. The majority of the lots of sheep were either pure Dishleys and Southdowns, or crosses of these. I think the French farmers are wrong in not giving a trial to the excellent merits of the Shropshires. It must have been patriotism wounded at seeing the English races ever carrying off the prizes, that made the judges prefer a Normand pig, with ears flapping over eyes, long legs, flat sides, arched back and wild-boar bristles, to the symmetrical Yorkshire. In the case of native cattle, breeders aim to remedy the voluminous skeleton, the long neck, the heavy hanging head, the prominence of the shoulders forwards and sideways, the narrow flanks and

short sides, in fact the want of harmony and parallelism, which are the essential conditions of that compact and cubical total which constitute the merit of ameliorated races. The display of implements was excellent, and each year proves how rapidly French are tripping up foreign makers; in reapers and mowers the latter are still ahead by superiority in workmanship and excellence of material, and this in face of difficulties represented by 40 per cent. in prices.

M. Goffart's Ensilage Results.

Owing to serious illness, it is only now that M. Goffart has been able to publish the results of his forage in trenches, harvest for 1879,—a year exceptionally unfavorable for his system, and hence the more important to be studied. The humid season told on the maize; it germinated under difficulties, and an early October frost checked its growth; also, the green maize was cut, chopped and entrenched, between the 20th September and 8th November, pending bad weather. He had 74 acres under maize, which produced 30 tons to the acre, a yield much below ordinary years, at a total cost per acre of fr. 150 covering all outlay, from the preparation of the soil to the placing the maize in the trench; or about 5 sous per cwt. Now if we assume that an animal's daily rations represent about 6 per cent. of its weight, an ox of 12 cwts. would not cost more than two sous (one penny) per day, for its keep on the preserved green maize. M. Goffart has 100 head of cattle in his sheds fed exclusively on this diet; they are in excellent health, and prefer the stuff to green food.

Nothing new or good to be said about the phylloxera, save that public works are being undertaken to allow of the autumnal floodings of vineyards. F. C.

Paris, Feb. 26, 1880.

Valley of the James, Va.

Messrs. Editors American Farmer:

Allow me to call the attention of your readers to the immense advantages and attractions now held out in the James river valley to immigration and capital. There is no region in America more highly favored in natural advantages.—With immense agricultural resources; with inexhaustible mineral wealth; with unlimited water-power for manufacturing purposes; with the widest fields for the investment of capital; with cheap and fertile lands, abundantly in market; with a genial climate; with easy access to the best markets; and with abundant supplies of wood and water; there seems to be no desideratum wanting, save capital and enterprise, to develop and utilize these boundless resources.

The miserable old canal, which has heretofore been the great "bugbear" to frighten off capital and immigration, is soon to be substituted by the Richmond and Alleghany Railroad, now in rapid process of construction. The railroad, when finished, will inaugurate a new era in the life of this splendid region. Capital and immigration will be obliged to flow in; and new life, energy and enterprise will be imparted to every department of business.

In substituting the railroad for the canal, the latter will be left open for local transportation and for the employment of its water-power for manufacturing purposes; whilst the railroad will take its place for travel and *general* transportation.

I would take the occasion, in a special manner, to call the attention of the great iron interest to the unparalleled advantages held out to them in the valley of the James. Immense beds of the richest iron-ore in the world are found all along the banks of the river, commencing at Howardsville, fifty miles below Lynchburg, and running fifty miles above,—with abundance of fuel, coal and wood accessible. The materials for the manufacturing of iron are so abundant here that it is estimated that iron can be made here for $16 per ton; whilst it costs in Pennsylvania $30 per ton and in England $33.

Then, again, I beg to remind manufacturers of the immense water-power strewed all along the valley of the James. It is estimated that from the mountains to Richmond there is unemployed water-power equal to 100,000 horse-power.

To those wishing to engage in agricultural pursuits, the allurements are no less attractive. I mention as some of these: cheap lands, kind and productive, with great variety of products, cheap transportation, and easy access to market.

This hasty article is a mere synopsis of the advantages and resources of the valley of the James. It would require a volume to enumerate them all. WM. HOLMAN.

Cumberland Co., Va.

Herefords vs. Short-Horns in Queen Anne's.

Messrs. Editors American Farmer:

Your much-valued *Farmer* for March was duly received, and in its columns I find a reply to my article in your February No., entitled "Farming in Queen Anne's, Md." I shall endeavor to confine myself entirely to the text. I fully expected the "oddity" of that article to arouse the venerable Dr. Wm. H De Courcy to a reply full of sarcasm, for which he is noted; but as I expected, he would lose sight of farming in Queen Anne's and wander off into other counties of the Eastern Shore, among the names of Messrs. Lloyd, Hardcastle and Tilghman of Talbot, and Hendricksons of Kent. These are worthy names and pleasant gentlemen, for whom I have the highest regard; but they are not farmers of Queen Anne's, however beautiful their herds may be.

The facts are plainly told. The Herefords have no place in Queen Anne's except at Chester-on-the-Wye. Short-horns have remained so popular in Queen Anne's, as I have stated before, that they have taken the lead over all other herds of cattle; and when I said the Hereford was only to be found here and there, "an oddity to behold," I made a true statement which the doctor has not nor cannot deny. When I say an "oddity," I mean an occasional white-face scrub, the produce of a common woods cow by one of the doctor's breechy bulls that may have strayed away from home and left his mark.

Yet the doctor says they are great cattle, mature early and attain great weights. All this may be true, and I think the doctor believes all he says; but unfortunately he cannot get the people of Queen Anne's to think exactly as he thinks, at least about cattle, and hence he has been compelled, as he has told you, to sell the few that he has sold in Talbot and Kent.

He says 20 years ago he abandoned Short-horns for something better. Probably if he had them now he could sell a few calves to his county people, even in their then degenerate condition.

The doctor, being proud of his noble estate of Chester-on-the-Wye, had reasons to feel ashamed of a herd of inbred, badly-fed Short-horns. So far inferior to those of some of his friends, he sought the first opportunity to obliterate any pretences of Short-horns. Preferring grades that could not be classified and brought into competition with any of the pure breeds, he accepted the services of a Hereford bull. This I believe to be the origin of the doctor's Herefords. The only Herefords that I have seen on exhibition at our county fair in three years have been three; these were at the Kent Co. fair last fall; they were red with spotted faces. A Baltimore county breeder's show the pure white in the face. It may be the doctor has made important improvement in his mode of breeding Herefords! Could they have been grades, nothing more, from Chester-on-the-Wye?

He says that it must be admitted that upon the rich pastures of Kentucky and the fertile plains of the farther West, and under favorable circumstances of warm stables to protect him from the rigors of winter and the noonday heat of the summer sun, there can scarcely be found a more noble animal than the Short-horn. How poetically expressed by the doctor, and true to the letter. *All* stock must have good grass, shade and good water in summer, and warm quarters to protect them from the storms of winter. Either sheds or stables with plenty of winter feed, otherwise they will deteriorate. Anything that is worth keeping is worth keeping well; the doctor knows that full well. For upon his own estate may be found lands rich in grasses as those of Kentucky, and plains as fertile as the farther West, and the rigors of a winter's storm are not felt, when his cattle lie beneath his straw-thatched sheds; whilst in summer they lie during the heat of day beneath the spreading oak, whose thick foliage forbids the transmission of the rays of a noonday sun. Surely do they lack t e meal, the bran, the hay? The doctor, like many others, says nay. This is certainly more than most of our Short-horns get; yet they thrive, they do grow, and oxen have been sold from the adjoining farm to mine, grass and stalk-fed, then working in the field in the yoke, that weighed in Pennsylvania, after having been driven nearly one hundred miles, 4,500 lbs. Mr. Scott was their purchaser, to feed for beef. Let the doctor stumble over them and it may be he will know better their merits. Yet the doctor, with words that portray his uneasiness, advises elsewhere the *noble* Short-horns to go West "with the Cotswold and the Percheron." But they have no encouragement to go West; *our* people want these *bulls;* they appreciate them; and when the venerable doctor and his Herefords have gone beneath the velvety sod of Chester-on-the-Wye, the Short-horn will yet exist, and reign then, as now, supreme. I am not proud as the doctor is at being the only breeder of Herefords in Queen Anne's Co., Md. I am proud of my herd of Short-horns—not because I am the only breeder, but because, by close attention to their development, I have won many laurels at the fairs over all other breeds, and am proud to be able to wear them. I have sold Short-horn bulls to the following persons in Queen Anne's Co., Md.; not 20 years ago, as the doctor did, but during the last 24 months, (they are breeders of Short-horns:) John F. Godwin, Charles McCallister, Joshua Cosden, W. T. P. Turpin, Geo. W. Smith, Col. J. R. Emory, Mrs. Lloyd Tilghman, Jos. E. Elliott, and J. Hersey Hall. I may add that others have gone to such men as W. H. Steward and Wm. J. Vannort, of Kent Co., and the Hon. E. K. Wilson, Snow Hill, Md. I will say still further that I did not need Short-horns 20 years ago, as the doctor did. In the 10th year of my life I might have dropped into the folly that the doctor did of inaugurating a crossed breed as the doctor did; but at riper years of 20 I commenced breeding Short-horns, and, instead of introducing a Hereford bull upon my Short-horn cows, procured from my father, as the doctor would have recommended, I introduced the best blood of Short-horn stock of Worth of Pennsylvania, Robbins of Connecticut, Gowen of Pennsylvania, and more recently Ficklin of Virginia, Schnebly of Maryland; last, but not least, Roan Duke, bred by Thos. L. McKeen, Easton, Pa.

With such blood, my calves go as fast as my cows can bring them, at from $35 to $50 each, at 4 months old, and principally to the doctor's and my county people. I sell no Short-horn calves to butchers, as the doctor does; they are too valuable to die at so young an age; nor do I ever sell yearlings and calves as low as $25 each as breeders. The doctor does this—not to force the introduction of his Herefords, but because *he is a public-spirited man*, wanting to sow his good seed far and near; *and they never stop near.* Can you wonder at his wanting the *noble Short-horn* to "go West?" The Herefords, a *middle class*, might then be first. But the "noble Short-horn" will stay at home and reign supreme and guard the gates of Chester-on-the-Wye. I have now three bull calves, all sold, to be delivered at 4 months old, and have promised some others from certain cows should they come bulls. I shall have no more bulls for sale before September next. Draw my advertisement in your paper, and put one in for the doctor in the meantime; this summer he will have no opposition on sales. Let him put in an "oddity" here and there, if nowhere else, in the whortleberry swamps. In alluding to my comments on the Short-horns, the doctor says: "All of which is very pretty and poetic, and, it is hoped, may be seen by you, Messrs. Editors, without either spectacles or the aid of a telephone." Advise him, Messrs. Editors, when next he views his herd, to leave his spectacles off, for surely they have deluded him. He is well versed with the

telephone, for his neighbors have so often whispered in his ear: "No, not Herefords; we want Short-horns." CENTREVILLE.

A Good Sheep Dip.

Messrs. Editors American Farmer:

Hearing Little's chemical fluid or sheep dip recommended, I sent to Mr. T. W. Lawford for a bottle of it to try on a lot of yearling sheep that I had found were seriously hurt by the great number of sheep ticks or lice that were on them; so much so that they were daily growing poorer, and were scratching at every fence-post as they passed. January 6th *sheared* five or six of the worst-looking lambs in the lot, and carefully washed them all over in some of the fluid diluted as directed; in a few days had them washed a second time, and again for the third and last time. Since then, being so much pleased with the winter shearing and washing that I sheared another lot and treated the same way, and am now able to report all doing much better than *those with the wool* on, and do not think there is one tick on a sheep in the lot. It is with pleasure that I write the above facts, and hope it will be the means of getting others to try for themselves what I believe to be a most valuable article, and one that ought to be in the hands of all sheep-owners. But do not expect one application to be sufficient.

Yours truly, THOS. J. LEA.

Montgomery Co., Md., March 20th, 1880.

JERSEY BELLE OF SCITUATE, 7828 H. R.

OWNED BY CHARLES O. ELLMS, GREENBUSH, MASS.

This cow is one of the most noted of her race, and her fame has attracted thousands to visit her. Mr. Ellms writes us as follows regarding her:

The Jersey cow Jersey Belle, (H. R. 7828,) was 8 years old last July; weight 952 lbs.; color, fawn and white. Her engraving and account of her previous to 1877 is in the Massachusetts Agricultural Report of that year. On February 25th, 1877, she calved; and March 5th she made 3 lbs. 6 ozs. of butter. The three days following she made 9 lbs. 9 ozs.; that week 21 lbs. 5 ozs.; in eleven days 32 lbs.; and she averaged for five months 19 lbs. per week. One morning's milking in July made 1 lb. 10 ozs. of butter; up to August 1st 400 lbs.; to September 472 lbs.; to October 532 lbs.; and to the following March 5th, 1878, she made 705 lbs. of butter.

She calved again May 10th, 1878, and in one week in May she made her highest yield: 22 lbs. 13 ozs., and one day 3 lbs 6 ozs.,—the same as the year before. Jersey Belle's milkings of September 29 and 30, 1878, made 3 lbs. 14½ ozs. of butter, which was on exhibition at the Marshfield Agricultural and Horticultural Fair, held at Marshfield, Mass.; also at Marshfield Fair of September 11th, 1879. The morning's milk of September 6th churned 1 lb. 5 ozs., and was on exhibition, and she is now making over

1 lb. of butter a day, (March 4th, 1880,) and calves in May.

Her daughter, Belle of Scituate, 5 years old, (H. R. 7977,) has made as high as 16 lbs. in one week. Another one, Lass of Scituate, 2 years old, (H. R. 9555,) has lately been purchased by Col. H. S. Russell, owner of Smuggler, and, by appearance, will compare with Jersey Belle, having the same deep-yellow skin and escutcheon. Jersey Belle, besides her great butter yield, is remarkable in another way, viz: the deep golden color of her butter being the same in winter as summer, so that the best judges cannot believe but what it is colored until they see the cream. Her butter (two days churning, Nov. 29 and 30, 2 lbs. 11 ozs.,) was at late Massachusetts State Butter Show, Greenfield, Mass.; then at late Butter Show, New York City. Judges said it was the highest-colored butter there. It would take pages to tell of her merits.

Jersey Bull Le Brocq's Prize.

[See portrait on page 94 of March number.]

This young bull was bred by Mr. John Le Brocq, St. Clement's Parish, Island of Jersey, and was exhibited April, 1878, at 17 months, at the Royal Jersey Agricultural Show, where he was pronounced the best bull of his age on the Island. Messrs. Churchman & Jackson imported him in August, 1878, paying a high price for him, the price being a secondary consideration with them to quality.

As showing the wide distribution of the Jerseys from the Beech Grove herd and the handsome figures obtained therefor, we quote the following from a recent letter we have received from Mr. Jackson:

"We recently sold to Georgia a young imported bull (18 months) for $500, and have negotiations under progress with same buyer for a choice heifer from one of our richest butter strains. We have recently sent young animals to Texas, Tennessee, Mississippi and other Southern States. Have also sold during the past week a cow calf, from Bounty, 1606, *two months old*, by Le Brocq's Prize (with some other heifers;) the price of the first named is $250. These go to Chicago. Bounty and their stock is held in high esteem, (*deservedly*) for she has proven her ability to reproduce her own fine qualities unerringly, as well as able to produce a large yield of finest butter. *She* is one of the foundation of Beech Grove herd, and I guess is booked for a life membership, as we have no price upon her."

POLLED CATTLE.—Mr. A. B. Allen, a well-known writer on live-stock and other agricultural subjects, is a warm advocate for the hornless breeds of cattle, which, he claims, can be reared and marketed for 7 to 10 per cent. less cost than horned Steers which are now appearing in our markets the produce of long-horned Texas cows, crossed by Scotch black polled bulls, which were taken out to the Western Plains some years ago, are much liked,—they being polled, or with mere stubs of horns. He urges, in view of increasing shipments of steers across the Atlantic, that this matter is more than ever important, as polled steers can be imported more safely and cheaply, their hides are not gored by their fellows, they arrive at their destination in superior condition, and are of quicker sale at better prices. He writes to the *N. Y. Tribune* that the substitution of the hornless for horned beasts can be made much more rapidly than is supposed. There is, he says, scarcely a county throughout the United States in which a few polled cows may not be found, and in some districts they predominate. As these are mostly of moderate size they should be first crossed with the compact short-horn bulls, in order to increase the size of their offspring. The female produce of this cross should be then bred to the larger polled bulls, of which each one, with due care, may be made to serve one hundred cows annually. This would insure a rapid increase of polled stock throughout the country, which may be further improved in size, form and quality, from generation to generation, as required. With our illimitable means to work with, and such a great and well-paying prospective market as our farmers now have open to them, both at home and abroad, British farmers would instantly set about such an improvement, and rapidly succeed in it. Why should not the Americans, with their acknowledged enterprise, intelligence and skill, do the same? I think it will be a disgrace to us if we do not, and we shall deservedly forfeit a great pecuniary advantage unless we avail ourselves of this easily accomplished improvement in our cattle breeding.

HOG CHOLERA.—John M. Stehl, whose location is not given, but who says he is a Pennsylvania Dutchman, says in *Land and Home* there are special causes for this and analagous complaints, but there is also one cause which affects all hogs alike—a weak constitution. Although this of itself would never produce the disease, yet, by preventing the hog from resisting the special causes, it is one of the most fertile causes of it. The constitutions of hogs are often impaired by breeding immature animals. Farmers certainly ought to know that undeveloped animals will produce weak and ill-constitutioned progeny. Yet, in direct opposition to this law of nature, many breeders expect pigs of one spring to raise pigs the next. I am acquainted with a gentleman who keeps over 100 hogs, but has not had "cholera" on his farm for more than 20 years, though his neighbors' hogs have "died like flies;" and he attributes his immunity to the fact that he breeds none but matured animals. Another cause of weak constitutions is in-and-in breeding, an evil which, though not so great as formerly, is still practiced by many. This habit was encouraged by the rapid development of a hog in which an obese habit is predominant. The first special cause to be noticed is food. Hogs are omnivorous animals. If possible, they feed on roots, grass, worms, mast, decayed woods, bark, &c.; but they are expected to thrive on corn, for breakfast, dinner and supper, whether it be sound, soft, rotten, green or dirty. No salt, no ashes, no vegetables,

no grasses, no mast, no roots, no worms, no decayed wood, no bark—nothing is given them but corn, with water that no other animal will drink, stagnant, thick with mud, wallowed in, and full of disease germs. When will men learn that water unfit for other domestic animals is unfit for hogs?

The Cecil Farmers' Club.

Messrs. Editors American Farmer:

The club met at A. J. Michener's, June 11.

Lloyd Balderson stated that he had tried the Cooley system of raising cream, and that from 220 lbs. of milk he churned 10 lbs. 2 oz. of butter. To those who had not already provided themselves with vaults or spring-houses he would recommend it. The Danish system was deep setting without submersion; but he thought no more butter could be made, and preferred the Cooley system on account of its rapidity. Treated certain plots of ground four years ago with different kinds of fertilizers. The effect of most of them was good. But after four years the Acidulated South Carolina Rock took the lead. This year the clover was down upon it. (This was a very poor grass year.) Waring's bone did well.

A. R. Magraw stated that the best potato-rows in his field were those cut just before planting. Also, the Italian Agricultural Commission had tried and recommended that 8 per cent. of borax be used in preserving butter.

H. H. Duyckink stated: on a field, up to a certain line, the wheat was extra good. The only reason he could give was, that up to this line some ten years ago the field was covered with sorghum waste. The rest of the field was not so good.

A motion was made and carried to instruct the secretary to publish the minutes.

The subject of the essay was: "What shall be done with our educated young men?"

A. J. Michener, who was expected to write upon that subject, said he was not able to write upon it; not knowing where to begin nor where to end.

J. A. Kirk came bravely to his assistance and read an essay upon the subject, which the club ordered to be printed with the minutes. After which some of the members spoke upon the subject.

After dinner, farm and buildings were inspected. Ellis Duyckinck was first called. Was pleased. Denounced a beam in the barn that was so low that his father in passing struck his head. J. Bunting could see better grass nearer home. A. R. Magraw thought he would never regret the money expended in building the porch around his house. The rest of the club said things looked well, and noticed great improvement since he had been associated with the club.

Questions.

Ellis Duyckinck wanted to know how to gather white-thorn seeds, so as to be able to raise plants.

L. Balderson recommended to follow nature as closely as possible; for him to scrape the ground under the tree into a heap, where it would be subjected to the frosts and snows.

G. Gillespie stated his sweet-potato vines were damaged by an insect eating holes in the leaves.

Recommended to use May Apple. Boil the May Apple in water. Use when cold.

J. Bunting wanted to know how to kill foxes.

Recommended to use the Virginia plan of concussion. Fill a bottle with powder, putting in a fuse; cork tightly, putting as far down the hole as possible; filling the hole with dirt and exploding it.

H. H. Duyckinck had a mule with a wart on it. Remedy: lard and salt mixed into a salve.

Ammonia—Its Loss by Evaporation.

This question has been frequently discussed and not very generally decided in the minds of writers and others who have taken part in the investigation. The Boston *Cultivator* gives the result of the experiments of Dr. Vœlker, chemist of the English Royal Agricultural Society, with fresh horse-manure, gathered from the stables before being mixed with the heaps, which will, no doubt, interest and surprise many. In one experiment the amount of ammonia, which was drawn out by long-continued boiling, amounted to only 6.6 pounds per ton, which, at 20 cents per ton, would amount to $1.32 per ton. The loss, however, on the land would not amount to a quantity anything like this, for in such case the ammonia was extracted with boiling water; a second experiment, with a sample of hot, fermenting horse-manure, emitting a strong and pungent odor, lost, in like manner, less than two pounds per ton, or 39 2-10 cents in value. As the excrement, even as hot as this is, soon cooled, when spread upon the ground, and as the fresh earth absorbs ammonia very rapidly, these experiments would indicate a loss in practice of too small a value to be taken into account, when the convenience of time is taken into consideration. A large majority of our farmers are frequently deterred from drawing out manure at times when the hauling would cost very little, on account of the teams standing idle in the barns, for fear of loss by exposure, but so small a loss should never be considered when a question of convenience arises.

A Prize Farm.—Mr. H. A. Barton, to whom the Berkshire (Massachusetts) Agricultural Society awarded the prize for first premium farm in 1879, has an artificial pond for bathing in summer, ice-making in winter, and for propagating fish; keeps thirty cows now, against seven ten years ago, on the same land; sells milk in Pittsfield, and ships to New York City in patent cans, filled after the animal heat has passed off, locked, and opened by the consumers themselves. He feeds roots, and, last fall, the fresh pomace of the apples from which 350 barrels of cider was extracted; cows are stabled every night the year round; all liquids absorbed by sand; and the manure, which averages one load a day, is hauled out frequently and spread on meadows, or, in winter, on land intended for plowing in the spring.

Horticulture.

Pleasure Grounds and Greenhouse. April, 1880.

By W. D. BRACKENRIDGE, Florist and Nurseryman, Govanstown, Baltimore Co., Md.

Pleasure Grounds.

Horticulture, in its various branches, is felt by all who have gone freely into it to be an exciting pursuit, particularly during early spring months, calling forth all the energies of both body and mind in supplying demands made on us at certain times and seasons, viz: in the preparation of land for planting, sowing, and making improvements generally; also in pruning trees, shrubs, and switching of hedges,—together with a thousand little jobs presenting themselves as the season progresses. And then the farthest-sighted plans serially laid down will often get deranged by changes of weather, as the weather-king does not always distribute his blessings to suit our notions of adaptation. Therefore we repeat, that horticulture is an art very exciting, and one that frequently perplexes.

We may here safely chronicle the past winter as having been an extraordinarily mild one, so much so that from the 10th of last month up to the present time our hedge of Pyrus japonica, 6 feet high and 150 feet long, has been in a full blaze of crimson bloom—a sight worthy of being admired.

We have also had in full bloom during the same period, or a week earlier, the Lonicera fragrantissima, with its white, sweet-scented flowers, which perfume the atmosphere for a distance of 100 feet all around; the Lonicera Standishii, which resembles the last very much, and came into flower about the same time, but its flowers are not so fragrant. A few scattered blossoms have also made their appearance on the Spiræa bellidifolia, while Jasminum nudiflorum has been in full flower since December; it grows freely in almost any soil, and is admirably adapted to make up groups on the lawn in a sheltered spot, mixed in with Mahonia aquifolia or Cratægus pyracantha, the branches taking root freely at the points; therefore a single plant will soon take in a large space; but it requires a little shade and shelter in order to have it bloom well in early spring—as sharp, cold winds injure the flowers.

Edgings and Hedges.

There are a number of shrubs now in cultivation whose habit, character of foliage and flowers distinguish them as admirable subjects of which to form edgings for large groups of shrubbery on lawns, or as low division hedges. And as best adapted for edgings—that is, if the groups are large—we recommend the Rhus glabra var: laciniata, which is a fine-leaved variety of the common Sumach, and first found growing wild near West Chester, Pa., and is characterized as having long bipinnate leaves, which towards the fall take on a beautiful bronze tint, while during the summer they are very desirable to mix with flowers in making up table bouquets. In fact, they are as good for this purpose as ferns. To cause the plants to send out fine foliage, they should be cut down to the ground every spring.

For smaller groups we know of nothing so neat as Euonymus radicans variegata; the shoots of this, when pegged down to the ground, will send out roots their whole length, and only want a little shearing in summer to keep it in shape. The color of the leaves is made up of pure white and green, while their shape is somewhat that of a tree-box.

Various kinds of Periwinkle make tolerable good edgings, provided only one kind is used in making up the line.

For low division hedges we admire the Spiræa callosa alba; with us this never exceeds two feet in height, and possesses the good quality of producing its corymbs of white flowers during the whole summer, requiring little trimming.

Spiræa Thunbergii is a very elegant plant, growing to the height of about four to five feet, and furnished with linear lanceolate leaves and a profusion of small white flowers. It blooms when about ten to twelve inches high, and should be cut into shape as soon as the flowers decay, observing afterwards to have only the straggling branches pinched in until it blooms again. We may here notice that the leaves assume a crimson tint towards fall, and are then used in forming letters and figures in making up designs of dessicated leaves.

Another shrub not to be lost sight of is the Deutzia crenata flora pleno, a plant of sweet growth, and producing its double pink blossoms when about 18 inches high. Any trimming which it gets ought to be immediately after the flowers fade.

To form ornamental hedges that would reach to the height of 6 to 8 feet, we have numerous twiggy shrubs and small trees well adapted for that purpose, and foremost among the deciduous kinds the Acer Campestre, or English field Maple. It throws its branches out freely and densely near to the ground, and the bark of the main stems are furnished with corky ridges, after the fashion of what may be seen on the Sweet Gum. The leaves are small and bluntly five-lobed, and altogether the plant stands shearing well.

We next notice the Carpinus Americana, known as Hornbeam or Iron-wood, and very closely resembling the last is Ostrya Virginica—Hop Hornbeam or Iron-wood of some. These two, like our native Beech, to which they are nearly allied, have very rigid stems furnished with lateral branches from the ground upwards, and when young hold their leaves till after mid-winter; and this latter characteristic is more evident when the hedge is kept constantly trimmed.

If we were to plant a hedge for the sake of having fine flowers in summer and beautiful fruit in autumn, we would select the Viburnum prunifolium, or Black Haw as it is sometimes called. This is a very branchy, strong-growing plant, found wild in thickets on dry banks from Pennsylvania all through Maryland and Virginia; and as the fruit is edible, birds are attracted thereby.

There might be a great many more articles enumerated here suitable for our purpose, but we cannot pass unnoticed the Ligustrum ovali-

formis, or Japan Privit, which possesses handsome dark green foliage, and produces in profusion its panicles of white fragrant flowers in the early part of July.

The Pyrus japonica, or Scarlet-flowering Quince, is generally well known, and, as we said above, is very gaudy as a hedge plant, yet not quite formidable enough to resist the passage of cattle. But should anyone desire a hedge for that purpose, we recommend them to have recourse to the Osage Orange, Honey Locust, or Cockspur Thorn.

There is another thorny bush, which myself and others are about to bring out as a hedge plant, known as Christ's Thorn, or Jub-jub, the branches of which are very numerous, and beset with a liberal supply of sharp prickles; the leaves are pinnate, and resemble very much those of the Mountain Ash, while the fruit is oblong-ovate and edible.

Evergreen Hedges.

For Evergreen hedges we would recommend the American Arborvitæ and Hemlock Spruce, both of which require to be sheared once every year, and that in the month of March or April. Some people trim their evergreen hedges twice every year, but we consider this checks the growth of the plant very much.

The Norway Spruce forms a very strong hedge; but no evergreen hedge is to be trusted in resisting the passage of cattle, and may be considered only as useful for shelter and ornament. The best form in which to cut a hedge to is that of the reversed capital letter A, thus giving access of light and air to the lower branches.

Single Specimen Trees.

The planting out singly of Evergreen trees and shrubs should now be progressed with, and in the performance of this work care should be taken that the roots do not get exposed for any great length of time to the sun and drying winds; more trees perish from this cause than any other, if we except that of planting too deep, an error which the uninitiated are apt to commit. And we would ask such to make themselves acquainted, before they begin to plant, with the habit and ultimate heights of the various kinds of trees they are about to commit to the ground, as we are pained often to see White Pine and Norway Spruce as near as 2 and 3 feet of the margin of a walk or carriage drive. Now such trees will, in the course of 6 to 8 years, send their branches out to the centre of an ordinary road or stop up a walk altogether, unless the lower branches be cut away; 15 to 20 would be a more proper distance to plant such trees back from a road or walk, while those trees of a more dwarfish habit could be placed in front and between the larger ones.

In the massing of deciduous or evergreen trees in a small place, the contrast in foliage must be made between tree and tree; but where the grounds are extensive, the contrast should be effected by the placing of a group of one kind of tree against that of another kind. Say Oaks against Maples, and Lindens against Ashes, while Birches and Beeches with Poplar and Willow, &c.; while solitary specimens of Paulonia imperialis, Maidens-hair tree and Sweet Gums look well on a lawn.

Greenhouse.

Recourse is had to a great variety of ways in multiplying the plants which now fill our greenhouses.

The number of Camellias are enlarged by cuttings, grafting, inarching, budding, and by seeds. Azaleas are multiplied in the same way, less the budding process, which is seldom resorted to.

Most all plants with which we are acquainted can be raised by cuttings of the stems, layering of the same, or division of the roots, provided they are subjected to a properly-adjusted warm and humid atmosphere. A gentle bottom heat facilitates the emission of roots, and cuttings of soft-wooded plants may be placed under its influence at once; but hard-wooded ones should not be subjected to it until such time as the base is well calloused over.

Many plants can readily be multiplied by adventitious buds which exist in the stems, axils and sinuosities of the leaves; these, if detatched, placed in sand and submitted to a proper temperature, will produce good plants. We refer here to such genera as Gloxinia, Gesneria, Echiveria, Bryophyllum, Lilium, &c.

But this way of increasing numbers may be viewed as artificial, while the more natural one is to reproduce them from seeds, which the merest tyro in the business can accomplish, provided he confines himself to such soft-wooded plants as Petunias, Verbenas, Geraniums and Centaureas. All to be observed is, not to cover the seed too deep. And the other appliances necessary to get the plants above ground are heat, moisture and shade; and it will take from 10 to 15 days before any of the above kinds show themselves, and whenever they do, light should be admitted to them; and so soon as the plants are large enough to be laid hold of by the fingers and thumb, prick them out into single pots or pans.

We have said that soft-wooded plants are readily got from seeds,—that is if the seed is good. But it is not so with nuts and seeds with hard envelopes from tropical countries and the more temperate parts of Africa and Australia, many of which when treated under the most favorable circumstances will remain dormant in the soil for one, and, frequently, for two years, before a plant greets your longing eyes. We have raised many kinds of Acacias and Chorozemias from Australia, that were six years old; but these, before sowing, were scalded in boiling water, and, so soon as this cooled, the seeds were committed to the earth. After remaining about 14 days in that state, which had caused the cotyledon to swell, our habit was to administer to the whole a mild solution of muriatic acid; this dose we repeated once every three or four weeks. These applications, combined with keeping the soil constantly moist, under a temperature of about 60°, had the effect of bringing any latent germ which may have been laying dormant, into action. But let me say that much patience is necessary in waiting on such articles; and when they are got above ground, a good

deal of knowledge is required in nursing of the young plants.

Towards the end of the month, should the weather prove mild, a few of the more hardy plants can be removed either to cold-frames or some warm sheltered spot. We mean such articles as Lauristinus, Pittosporums and Cyclamens that have done blooming.

As warm weather sets in, then admit air to the greenhouse freely.

Langford Seedling Apple.

Messrs. Editors American Farmer:

A few years ago the writer's attention was called to this apple by Mr. Thomas J. Vickers, a reliable Kent Co. (Md.) fruit-grower, who gave the following account of its origin. He says:

"I think in 1852, or about that time, the original tree (a little switch) was dug up along a fence-row and planted near an old house, then neglected and forgotten until it began to bear. This apple, by whomever tasted, was always pronounced a most delicious fruit; but I thought I could get a better apple from the nurseries, and bought the most noted kind (winter varieties,) and now am grafting every one of them with this. It is known only in this immediate locality. The tree is now large and bears every year, and has done so without fail since it was seven or eight years old. I honestly think, considering its fine flavor, excellent keeping qualities, vigor and hardiness, it should be planted by every one planting an orchard."

I have seen the fruit for several years and am much pleased with it. Regard it as a very valuable winter apple for Maryland and Delaware.

The average size is medium to large; color, a beautiful red, shaded with brown on the dark side, with a warm yellow cheek where exposed to the sun. The flesh is white, fine-grained, *very firm*, nice and juicy, sub-acid. It can easily be kept until March or April.

Philadelphia, March 10th, 1880. H. A. C.

Fig Culture.

Messrs. Editors American Farmer:

The secret of growing figs in the Middle and Northern States lies in the fact that the wood must be ripened before it is put into winter quarters, or it will rot. As with other deciduous trees, the leaves fall when the wood is matured.

Severe frosts in the early autumn destroy the leaves; of course the wood cannot ripen. But the South often suffers in this direction as well as the North. I have a note before me from a fig-culturalist in the State of Georgia, which says: "All our fig trees were killed in the latter part of November, when a sudden cold snap caught them in sap."

Much is said about fig-growing at the South; certainly it could not be worse at the North.

The point, then, is to shield the fig bushes from the frosts, and which may be done with anything most convenient,—brush, boards, barrels, paper or cloth caps, etc.

See my pamphlet: "Fig Culture at the North."

The fig tree will endure a cold of 40 degrees Fahrenheit, and any one can tell whether the indications are that the thermometer will go below that figure during the night. If so, the protection must be given.

After one or two such frosts, we generally have a succession of mild and warm days in which the wood will ripen.

Should any one think that there is too much trouble in all this, I answer that it will pay, and that there is trouble in all fruit-growing. What! with blight, curculio, grubs, etc., there is a "heap" of trouble.

You can grow figs in abundance, and have them just as fine as those imported,—better even, for you can have them fresh!

Washington, D. C. G. F. Needham.

The Crescent Strawberry.

A correspondent of the Massachusetts *Plowman* gives a glowing description of the Crescent strawberry, which he raised last summer, which, if found as represented, will be a great acquisition to the numerous excellent varieties heretofore grown. He says he picked at the rate of over fourteen hundred boxes to the acre at one picking, and the bed yielded through the season at the rate of about eight thousand quarts to the acre. The soil was poor, and he put on no manure or fertilizers except a sprinkle of ashes just before the plants were set out. Had the ground been well manured, he is confident the yield would have been at least at the rate of ten thousand quarts per acre. As compared with Wilson and Downing, the yield was twice as much as the Wilson and three times as much as the Downing. In size the Crescent averages full as large as the Wilson; not quite so fine, but more so than the Downing. He thinks it will bear transportation fifty miles to market, and its bright red color makes it very attractive, and it sells readily where the Wilson will not. The flavor of the Crescent, if picked when it first turns red, is poor; but if permitted to remain on the vines until thoroughly ripe the flavor is very good. He believes that ten thousand quarts of Crescents can be grown on an acre with less cost than five thousand Wilson, Chas. Downing, or any other varieties he ever cultivated. First, because of its enormous productiveness. Second, the prolific habit of the plants. It don't require but half the quantity of plants to set an acre of Crescents as it does of the Wilson, and this is quite an item in the cost of cultivation.

The Lady Washington Grape.—One of Mr. Ricketts' seedlings has been put upon the market and promises to be a popular variety. It is described as a vigorous-growing vine, short-jointed; the leaves large and thick; (being very large and compact;) berry medium to large, round; color, deep yellow, with a tinge of delicate pink and covered with a white bloom; quality very good. It is a cross between the Concord and Allen's Hybrid, and promises well for market and amateurs.

The Stump Apple.

This is a new, very handsome and valuable variety which originated near Rochester. The fruit is medium size, conical, skin yellow striped and shaded with light red. Resembles Sherwood's Favorite; flesh firm, crisp, juicy, tender, sprightly, sub-acid. The fruit, from its uniform size, fine appearance, and mild pleasant flavor, commands a ready sale at good prices. Pronounced by Messrs. Ellwanger & Barry a *decided acquisition* to the list of profitable market and good garden varieties. Tree of handsome stocky growth, and very prolific. The remarkably productive character of the tree may be judged from the engraving, drawn from nature, of a branch of this apple.

Pear Blight.

The following paper was read at a recent meeting of Homeland Grange, by Mr. Wm. D. Brackenridge, its Lecturer:

The first step in any scientific pursuit is to know what is known. What is new and dependent on experience and original observation will then come easier and more certainly.

It is an economy of time and labor in any investigation to ascertain well what has been done before in any field of experiment, as much time is often irrecoverably lost or wasted in blundering over proposed experiments or novel cures that have long before been thoroughly tested and definitely settled. And in no affair belonging to pomological pursuits is this more true than in what is known as "pear blight,"—there having been so many incredulous experiments, so many delusory appearances, so much pretension and assertions made with regard to the cause or causes which produce such disastrous results. There is, in a word, so much to confuse, mislead and deceive with regard even to cures put forth to stop its ravages, and in all truth and soberness we must say that, at present, we know about as much of an efficacious cure for the malady which gives rise to such a fatal disease as we did thirty years ago. And any man who can satisfactorily solve these doubts deserves to be looked upon in no other light than that of a great public benefactor.

There have been several praiseworthy laborers in this inviting field, all of them evincing more or less faults and excellences, more or less accuracy mixed with error,—the result perhaps in being in too great a haste and harboring too great a quantity of personal vanity in believing they had seen and discovered things, in the form of causes, which on thorough investigation of others were found to have no existence.

For ourselves, we have known and examined many different cases and forms of "pear blight," and we must honestly confess that we cannot positively say what are the cause or causes, neither can we positively recommend any cure or preventive.

What we know is that blight in the pear exists in two forms, and the first of these we denominate "insect blight," which makes its appearance on the leaves towards the extremities of the young shoots during the summer months. These become brown and in a short time shrivel up and fall off, while the wood of the shoot becomes hard and dried up; and the best thing to do now is to cut it off down to the healthy wood. The insect which causes this damage is a very minute brown animal, which deposits its eggs at the base of a bud during early summer.

There is another insect which makes sad havoc among young pear trees, and known as the pear or rose slug, the substance of whose body is soft, of a pale olive color, and about one-quarter of an inch in length. This pest, if let alone, eats during the months of June and July the epidermis of the upper surface of the leaf, causing them to turn brown and fall off. I

have seen every leaf on a six-year-old tree destroyed within ten days from the time the slugs first made their appearance, thereby causing another set of leaves to be produced by the tree; and should any fruit be on such trees they prove worthless. A good cure for these slugs is whale-oil soap and water or quicklime dusted over them in the morning.

We now come to discuss that most formidable and disastrous form of the disease to which the pear is subject, usually called "frozen-sap blight;" but before doing so permit me to say a few words about how the sap of a tree is considered to circulate.

Vegetable physiologists have long taught us that the sap ascends through the wood, but chiefly through the alburnum; while on the other hand its descent downwards is through the woody tissues of the bark, and the bark, all know, is the coating to the stem immediately over the wood, and at certain seasons of the year can be separated from it without much difficulty,—the outer part of which is called the epidermis and the inner the liber; and some kinds of trees after a certain number of years growth begin to slough their outer bark or rind, which consists either of hard thin plates or of a corky substance, sometimes in long stripes, as in the grape vine.

In the spring season, between the bark and the wood there is found a viscid fluid, which is known as cambium.

The "frozen sap blight" usually makes its appearance during the summer months, and its presence can often be detected by the sudden wilting of the leaves, which often turn quite black; and if the branches bearing such leaves are carefully examined, it will be found that patches of the bark, sometimes from six inches to two feet in length, present a dark, dry, shriveled aspect, which, when opened by the knife, reveals a brownish appearance of both the inner bark and wood, from which exudes a thick, sticky, stinking, dark fluid. As to how fast this disease spreads from the point or centre where it first may have appeared, we do not know, but we are inclined to think that its descent is faster than its ascent. And our advice to every one whose trees may be affected by the disease is, without delay, to cut off the affected branch some inches below the point to which the disease can be traced.

Various theories have revolved through our mind as to the cause of this disease, and then, just as we had imagined that our discovery was an established fact, some new fact would arise strong enough to scatter our former convictions to the winds.

We once thought that pear trees, the ground around which was highly manured and cropped, with vegetables between, was thereby so excited as to cause the trees to make a second or autumn growth, laying them more liable to be attacked by early fall frosts than such as were grown on sod land, or where it was not cultivated at all; but this view was found to be wrong, for we have seen trees from both situations affected by the disease, pretty nearly alike.

We know a pear orchard that is highly manured annually, and where the trees make growths from three to five feet, and yet no blight has made its appearance among them.

We thought further, that a cold, wet sub-soil, might act against the return of the sap downwards in the fall by early frosts overtaking it, and that its lodgment in the circulating medium during severe winter weather, whereby the sap-vessels became ruptured, and this, meeting the returning flow in spring, interrupted its passage upwards, by the disrupted vessels and clammy sap; but we found that even this theory did not hold good, for we saw that trees standing on well-drained land, and that had ripened their wood and shed their leaves early, were not exempt from its ravages.

We have often thought of the striking resemblance which this pear blight bears to the paralyzed limbs or body of a human being; at least the analogy holds good so far, that in both cases action and circulation of the sap ceases. Neither are those that are highly or poorly fed exempt from its ravages.

Some kinds of pears are more subject to its attacks than others, but we know of no kind that is entirely exempt from its fatal influence, and the few that come off least unscathed are the Seckel and Bell pear, while the Choke pear in fence-rows and wild stocks raised in the nursery are as subject to its attacks as the most esteemed foreign and native kinds. I speak of Choke and Bell pears growing in the vicinity of where I now write.

The foregoing remarks are made with no desire to have it understood that we have thrown any new light upon this obscure subject, but rather that others may be induced to give their views on the vexed question, viz: what is the cause which gives rise to the blighting of the Pear tree, as we have described it above. We know its effects. W. D. BRACKENRIDGE.

Maryland Horticultural Society.

The first show for this year was held March 4th,—the display, notwithstanding the rather unfavorable weather, being a creditable one. Azaleas and collections of greenhouse plants were shown by W. H. Perot, R. W. L. Rasin, Patterson Park, R. J. Halliday, E. Hoen, S. Feast & Sons, the first named having also some magnificent specimens of Orchids. Cut flowers were unusually abundant for the season, and some handsome baskets were deposited by R. W. L. Rasin and John Cook, and a stand of flowers, mostly Gloire de Dijon roses, cut from an out-door garden in Charleston, S. C., and contributed by Dr. J. J. Chisolm, attracted much attention. There were numerous displays of Pansies, Violets, and some exceptionally fine Hyacinths.

The following were the awards: Best 6 Azaleas, $2, S. Feast & Sons; best single Azalea, $1, R. W. L. Rasin; best 6 Daisies, $1, E. Hoen; best 6 Orchids, $2, W. H. Perot; best 6 Hyacinths, in pots, $1, W. H. Perot; best 6 in glasses, $1, W. H. Wehrhane; best Basket Cut Flowers, $3, John Cook; best Hanging Basket, $1, E. Hoen; best 12 Rosebuds, $1, John Cook; best 24 Pansies, $1, R. W. L. Rasin; best 50 Violets, $1, Alex. Scott.

The display of plants from Wm. Fraser, superintendent Patterson Park, was specially commended by the judges for the healthy and well-flowered specimens it comprised, as were also the symmetrical and well cultivated plants from R. J. Halliday.

Floral Novelties and Stand-Bys—Forcing Asparagus.

Messrs. Editors American Farmer:

The spring catalogues of florists and nurserymen are now all out again, with the usual number of novelties in plants. How few of these will survive and become popular! Would not a little more downright honesty and truth-telling on the part of florists be of ultimate advantage to them? It is really surprising to examine catalogues every spring and find things which were long ago decided worthless, still puffed by growers. When a florist first gets a new plant from abroad he cannot be held responsible for the description he gives of it, as he has to depend on the parties from whom he purchased; but when an article is found for any reason to be worthless here, is it exactly honest to keep the same highly-colored description in the catalogue year after year? Take the Pearl tuberose for example: it is really a fine flower and much larger and more double than the old variety. But every florist of experience knows that it is almost worthless for those who wish to bloom it in the open air, from the fact that it seldom opens its flowers well except under glass. It is decidedly the best for florists' use, as they generally bloom it under glass. Yet take up whatever catalogue you choose, and you find the Pearl tuberose praised without a word of caution, and the price is still kept higher than old double, for no good reason whatever, since the Pearl is more plentiful, if anything, than the old. I use the Pearl for the reason that it is a better flower under glass, and I never want them in the garden. For out-door purposes I esteem the single tuberose superior to any, and am inclined to believe it will give more flowers in any situation than the double sorts. Amateurs who want tuberoses for out-door bloom, should always buy either the single or the old double, but never the Pearl.

Then there are many other plants really fine, but now quite common, that some florists persist in cataloguing as novelties and asking high prices for them. Only the other day I picked up a catalogue in which the Hydrangea Paniculata Grandiflora is stated to be "scarce and difficult to obtain!" Therefore the price must be kept up to fifty cents per plant. Now the fact is that this is really one of the finest hardy shrubs of late introduction, but it is a plant of remarkable easy and rapid propagation, and I will guarantee I can get an order for 10,000 or more filled in twenty-four hours notice, and at a very low figure. Still, it is well worth half a dollar to any one who values a fine shrub; but why not put the price on the merits of the article, and not pretend a thing is scarce when every respectable nurseryman has a full stock of it.

Among the new things that has escaped being over-praised is the new Heliotrope "Snow Wreath," sent out two years ago by Mr. Peter Henderson. There is usually so little distinctness in new Heliotropes, that I paid no attention to this one last year, and did not give it a trial until the present winter. I am satisfied that it is a great advance over all other Heliotropes I have ever seen. The trusses are very large and compact, and the florets are much larger than the old kinds, while the color is but a shade short of pure white. I find it to be of dwarf habit and an early and free bloomer, young plants in 3-inch pots making very large heads when only a few inches high. Florists should grow it largely, as it is certain to be popular as a market plant, while the flowers are valuable for funeral work. Another plant which is going to be very valuable for florists is the new "*Taberæmontana Camassa.*" The old Tabernæmontana Coronaria has long been an inhabitant of our hot-houses, but this is a much more dwarf species, and produces its lovely waxen white flowers in the greatest abundance on plants but six to ten inches high. The flowers slightly resemble those of the Stephanotis and are very fragrant. The plant is allied to the Oleander, and, in fact, was formerly classed as a Nerium. It requires hot-house treatment in winter, if flowers are wanted, but will live in a warm greenhouse and bloom finely in the open garden in summer.

I notice in the February number an inquiry from Mr. Todd in reference to forcing Asparagus. In the way Mr. T. proposes I have no doubt he will get the Asparagus considerably earlier than in the open ground, but I am of the opinion that it could be more profitably forced by being treated in a similar manner to that in which florists force Lily of the Valley in winter. I believe it would pay well to force Asparagus in low houses heated by flues or hot water. I should use good strong three-year-old roots; pack them as closely as they will lie on the benches of the greenhouse over the flues or hot-water pipes, give them plenty of water and plenty of heat and I feel sure the crop would pay well. The French gardeners have a plan for forcing Asparagus, which I expect Mr. Todd would find better suited for his use, as the roots are not exhausted as they would be on greenhouse benches. The French gardeners make their beds only four feet wide, with alleys about two feet wide between. The plants are set very shallow in the beds, and when forcing is to be commenced the alleys are dug out two feet deep and the soil placed on the beds. Portable frames are then set on the beds, and the deep trenches between them packed full of hot stable manure up to the top of the frames. The glasses are covered with mats at night and aired by tilling up at the back. The linings of hot manure are renewed occasionally and the beds are cut for two months. The sashes and frames are then removed, the manure carted away and the soil again filled into the alleys for the summer. I hope Mr. Todd will give us an account of his success with a simple glass covering on his beds.

W. F. MASSEY.

Hampton Gardens, March 17, 1880.

Gardening Then and Now.

Messrs. Editors American Farmer:

Not long ago, being playfully accused by a friend of "swearing by Peter Henderson," I could not but reflect on the wealth of meaning bound up in the expression.

A marked change has come over American gardening in the past 25 or 30 years; it is not now the complicated thing that it once was, and generous folks will cheerfully admit that no one man has had so large a share in bringing about the new order of things as our hero of the peaceful art, the renowned Peter Henderson. So true is this that in any allusion to the gardening of *then* and *now* it is impossible to dissociate Mr. Henderson's name, his books or his career, from the thread of our remarks.

In those days American gardening was beset with all the fuss and parade and minutiæ of detail common to European practice. If one were disposed to cut adrift from old conservative methods, he would most likely be called to account by his employer and asked to name his authority for the innovation. Things, however, were slowly righting themselves when, in 1867, they received a sudden impulse that has had a most beneficial and lasting effect. Mr. Henderson's books came like a new revelation. Their direct and graphic style was much in their favor, and, agreeing with the views of progressive gardeners everywhere, were welcomed as no books on gardening ever were before or since.

One great accomplishment of the practical gardener *then* was the ability to prescribe with the nicety of a physician the particular soil and stimulants required for each plant or class of plants that came under his notice. It will excite a smile when I mention that I have copied hundreds of such prescriptions from good authorities: "One part loam, one part leaf, and one part a little old rotten cow-dung," and so on *ad nauseum*. Peter Henderson draws his supplies for almost everything in the plant line from one good compost heap, and in this he now finds many imitators. A neighbor and I practiced the same thing long before we knew of an 'authority' in that particular, and doubtless many others fell into the same simple ways; indeed, it would not surprise me to learn that one and all of the beneficial changes to which Mr. Henderson has lent the weight of his authority were previously practiced by individuals here and there of a progressive turn of mind. But his mission was to have such important knowledge generally diffused, and to give the benefit of his long experience and remarkable success for the encouragement of beginners in the methods recommended and pursued by himself. I propose to notice some of those methods in another article; meantime I will just note the progress that has been made in the cultivation of celery, as that has been a prolific subject in the *Farmer* of late. Mr. Massey erroneously supposes that the *bed* system is peculiar to Baltimore. It is the system practiced in Europe time out of mind, with the trifling distinction that in their deep, level, *made* gardens, the celery is planted below the natural surface. Planting on the surface is an improvement certainly, but, in my opinion, planting in single rows on the surface represents the simplicity we have attained in the cultivation of this vegetable as compared with the laborious old-time method; and, further, I think that where climate is unfavorable to the carrying out of this plan it is something much to be regretted.

J. W.

Tea Roses.

In face of the many new plants that are from year to year placed before the public for their favor, the rose is, and will long continue to be, the people's favorite; and of all roses none give so much pleasure as the tea roses, wherever they can be grown. The original tea rose was not a strong grower, and it was very tender; but by hybridizing it has had both its growth and hardihood improved. After many years experience I find that to grow tea roses to the greatest perfection in the open air, a bed either small or large should be made of these alone. When planted with other plants, owing to their smaller size they often get overrun and often neglected in the fall, when even the hardiest of them are benefitted by some protection. A good form for a rose-bed is a long oval of any length, but about four feet wide. This will give ample room for three rows. The best soil for tea roses is a gravelly loam, with a southeastern exposure. To get the best results the bed should be trenched to the depth of *eighteen inches at least;* and if a good lot of well-rotted manure is incorporated with the soil it will be better than any after-manuring, which latter should not be neglected if fine blooms are expected. This depth of soil allows the roots good feeding ground, and also allows them to stand our summer drought, and gives us flowers at a time when many shallow-rooted plants have stopped blooming. It also gives the roses more strength to resist severe frosts. I have seen tea roses killed to ground and still make a fine bloom the same summer, when they had a good strong root. In planting a tea-rose bed it is better not to put too many kinds together, and some little attention should be paid to putting the middle row of the larger-growing kinds. No better guide can be had than any reliable nurseryman who makes roses in part a specialty. They can tell you the freest bloomers, the color, and especially those which stand our winter best. A bed 20x4 would carry about 50 roses. As these grow I like to peg the branches down, which keeps the ground shaded and has a tendency to keep down the weeds. I am also sure that a great many more flowers can be obtained. They can also be more easily protected in the winter. No better protection can be found than pine or cedar branches where they can be procured. I have found corn fodder also very good. Straw is not quite so good, as it is easily blown away and mats too closely around the plants after a snow or two has fallen on them. Leaves are an excellent protection also if they could be kept from blowing away. Tea roses should not in this climate be covered too soon, and they should be uncovered before they sprout too much. Very few cut their tea roses back enough in the spring,

and the best results come by pruning close, though blooms would come a little sooner if the branches were left longer. As to color, you have pure white, shaded straw and rose, light rose and yellow and salmon, also now nearly crimson, in Duchess of Edinburgh. I would not in a bed of 50 plants put over 10 varieties, and if I wanted more varieties I would make more beds. Through the summer, when watered it should be done thoroughly. It is better than a light watering oftener, and soapsuds or any liquid manure can always be applied to advantage.

CHAS. H. SNOW.

Cabbage Plants—Celery.

Messrs. Editors American Farmer:

The loss of cabbage plants sustained by Messrs. Watson and Todd was one in which they have the full sympathy of all cabbage growers, for I have yet to hear of a single grower who has not the same complaint to make; if there is such a fortunate being in existence I think that I but echo the wish of all who are engaged in the business when I express the hope that he may come forward with a statement of his experience.

For the first time in a period of 14 years I have met with a total loss of my fall-sown plants, and I think with Mr. Todd that it was the extreme warm weather of October, and the severity of the first frost, which caused this widespread destruction of plants.

I think with Peter Henderson that Mr. Todd sows Jersey Wakefield too early, as I have sown as early as the 25th of August and as late as the 1st of October, and always obtained the best results from sowings made about the 20th of September. But a good rich soil for the seed-bed will be absolutely necessary to bring the plants forward when the seed is put in this late. Sowing at this time I do not lose more than 4 per cent. of my plants by running to seed.

Now that we have got through the winter and have had time to think a little over it, I would ask if the destruction of our fall plants was so great a loss after all. It is true we have lost our seed and labor, and thereby have been forced to avail ourselves of the use of our frames to obtain plants for the spring planting; but *now* we are ready with fine plants that we have every reason to believe will give us a good crop of cabbage; *whereas*, if our fall plants had not *fallen* before that withering blast, we would have made no provision for an entire new planting, and it is my humble opinion that the continual growing and checking which they would have encountered throughout the whole of this exceptional winter would have *sent them all to seed*, and that, too, regardless of the *time of sowing*.

I would like to say to Mr. John Watson that I think it would be a good thing for both the grower and consumer of celery, if he will continue to agitate the row and trench system. We certainly can grow a finer crop by the row and trench system; but the trenching—here is the trouble. I have failed two winters in my efforts to save the celery grown in single rows and trenched, but am determined to try it again; and it would be well if all the growers of celery would give this method a trial, and compare notes.

CHAS. E. SANFORD,
Gardener to Mt. St. Mary's College.
Frederick Co., Md.

Vegetable Garden—April.

In reply to Mr. Todd, I would say that I have had no experience in forwarding asparagus in the way he proposes. Have forced it by lifting the old roots and placing on slight heat, but I feel sure that *that* plan would not pay. Mr. Todd believes that the winter's frost was partly the cause of his spring cabbage running to seed; but I feel quite convinced that sowing so early as the 3d or even the 9th September, in any part of Maryland, was cause sufficient without assigning any other. It may be that market gardeners (how I hate the words *truck* and *garden sass*) are obliged to sow early in order to have strong plants to stand the winter out-doors, but if so they have no reason to expect that a large proportion of their plants will not run to seed. The 20th is my date, and not a plant in a thousand has hitherto gone to seed. I had a splendid crop in 1878 from plants in frame, slightly shaded with bean-poles. That protection was not sufficient the following winter, and I lost many plants; but those that grew did not run to seed.

If your readers are not tired of the subject of celery, I would like to move an amendment to Mr. Massey's otherwise excellent article in the March number. He plants with a notched board, which I have discarded as being too slow, especially if a shower is in prospect. I use the *marker*, drawing it across the bed; I then mark off the side boundaries by means of the line and rake-handle. The planters can then work on any part of the bed and plant twice as fast as if they used boards. I have never raised a single plant of celery here that satisfied me; it is never half manured, and our hot dry fall is not the best condition to ensure success.

About the first of the month tomatoes will have to be transferred to another frame, putting the plants three or four inches apart. If heat is used it should be very slight, but a cold frame well covered at night is quite suitable. Now is the time to set out strawberries. Fine fruit can only be had by keeping down the runners, and when that plan is to be adopted the rows should be two and a half feet apart, and half that distance between the plants. Set up bean poles some weeks before planting time—it is so much work ahead. Mangels may be sown by the middle of the month; the larger they grow the better It is yet too early to plant table beet for winter. Two or three sowings of peas will go in this month, and the same of sweet corn; *Early Adams* first, and Early Adams and Concord, Egyptian or some other good sort second. String beans may be sown about the 25th, and that date is a good one to plant melons and cucumbers on inverted squares of sod for transplanting a month later. If the seeds are dibbled into the sod they transplant better. Cover with half an inch of fine earth.

There is necessarily much repetition in these hints. The main thing after all is to see that the land is properly prepared, and that the crop gets unceasing attention during the growing season. When we are conscious that we have done our best a handsome crop will be a source of delight, and when a crop fails or is indifferent we shall have no cause to repine.

Baltimore Co., Md. JOHN WATSON.

Deer Creek Farmers' Club.

The Deer Creek Club met at the residence of the President, Mr. R. Harris Archer, on Saturday last, March 20th. Seventeen active members and several honorary members and visitors were present.

To the *Ægis* we are indebted for the following report:

The committee to inspect the farm and buildings reported through the chairman, who said that he had known the farm since he was a child. It was a neat farm then and it is neat now. The buildings, however, had been greatly improved. Mr. Archer has one of the best barns in the country. His stock of all kinds are in good condition, as well as his growing wheat. The committee mentioned the fact that wheat on the north hill-sides looks better than on southern exposure. Mr. Archer has covered 13 acres of meadow with straw—a desirable thing to do. The committee thought Mr. Archer's surroundings were attractive, pleasant and all that could be desired.

Supplying Water to Barn-Yards.

The question appointed for consideration was: "What is the most convenient, best and cheapest mode of watering stock in barn-yards?"

Mr. Archer remarked that it depended upon circumstances. Situated as his barn-yard is, with a large barn-roof, he prefers and has a cistern. It is well to have a pump also. Pumping water every day for 50 or 60 head of stock is very laborious. When the cistern gets low and the weather is hard and dry, he lets his cattle go out and rub in the banks, once in a while. A natural flow of water to the barn-yard is best, but that is not always attainable. His cistern was built in 1870, and has given no trouble for nine years. It is oval-shaped, 15 by 10 feet inside, and 9 feet deep. It was built as follows: A wall one foot thick was laid dry. When one foot in height all around had been laid, it was smoothly pointed with cement. Then a grouting of sand and cement made thin was poured on the top of wall, and allowed to run between the stones. Another foot of wall was then laid and the same process repeated. The bottom was covered with a thick coating of broken stone, and the whole interior plastered with cement. The top was covered with boards. Cattle are fonder of cistern water than any other kind.

Bennett Barnes also preferred a cistern, but uses a well 31 feet deep. It is hard work to pump water for 30 or 40 head of stock.

S. B. Silver agreed with Mr Archer as to a cistern being the best mode of watering a barn-yard. His cistern is built as Mr. Archer described, but with square corners. Where a man has plenty of barn-roof he can put in a cistern at about the cost of digging a well. A cistern properly constructed seldom goes dry. Even two inches of snow will place a large quantity of water in his cistern. It is also well to have some other mode to depend upon. In building his cistern at first, clay was rammed on the bottom and the cement placed on that. It leaked, and then the bottom was covered with broken stone, on which two or three inches of cement was applied. It has not leaked since.

R. John Rogers said if he had a spring convenient that would supply a hydraulic ram he would like that. Next he would prefer a cistern. He thought the preference of horses and cattle for certain kinds of water was only a matter of habit. His horses will leave the field where there is running water and come to the barn-yard pump for their supply. Even if you have to pump water from a cistern much labor is saved. His experience is that a permanent job cannot be made by cementing immediately against the earth, but it might depend upon the character of the ground. His cistern is 10 feet across the top and 8 feet in the bottom, built in that way, and has always leaked. The proper way is to use bricks—say one width of bats, which are cheap—laid in cement and plastered over with it.

A. F. Hays also prefers a cistern, and intends to build one of brick and cement.

Wm. Munnikhuysen also thought stock and people too would get accustomed to any water. In Louisiana they have nothing but rain-water for drinking, and persons accustomed to it prefer it to any other. For watering a large number of stock, a windmill, to pump water from a well, might be used to advantage. It would not only supply water, but could be used to thresh and grind grain, &c.

James H. Ball thought the appliance to be used would depend altogether upon circumstances. If he could turn a running stream into his barn-yard he would prefer that to any other mode. Has had some experience in cisterns and never saw any trouble from cementing on the earth. He had had a cistern arranged so that every horse had water at will at his stall, and by this means he had cured a mare of heaves. In building this cistern the earth was firm for 9 or 10 feet. Then gravel was struck. A layer of bricks was placed against the gravel portion, cemented over; but above the gravel the cement was placed on the earth. An arch was formed over the top with bricks. No trouble was experienced with surface-water or frost.

Johns H Janney said he turns his stock out and tells them to go to the stream. When they are satisfied they return to the barn-yard.—Where the water is convenient he believed the exercise of walking to it is beneficial to the cattle. Has a pump 30 feet deep, and when it is not dry it easily waters 50 head of stock. Was undecided whether to put in a windmill or a cistern.

Dr. Jas. M. Magraw preferred a cistern to a ram, and agreed with Mr. Janney that cattle ought to be turned out every day for exercise. The objection to a pump is that the water is

liable to be contaminated from the stable yard.

John Moores uses a pump, which is situated under the barn, in the feed-room. It is 30 feet deep, and it requires a great deal of labor to pump water for 30 or 40 head of stock. He had found by continued observation and experiment that a well-fed bullock of 1,000 lbs. will consume an average of 7 gallons of water a day, and that at one time. An average horse will drink 5 gallons a day when not at work. A fattening hog and sheep will each consume about 1 gallon a day. Cattle and horses not so well fed will drink less. He waters his cattle once a day, at 11 o'clock. They will not drink any more during the day, and have done remarkably well. It is important to have water very convenient, and he preferred a cistern. If placed under the ground it should be lined with one course of brick, or be built entirely of stone. It should be built in the summer. He would use one-third good sharp sand with cement. It is a mistake to use too much sand. He would not be without a pump, even if he had a cistern.

Mr. Archer mentioned that he used common iron pipes. They had stood for ten years and were good yet.

Geo. E. Silver remarked that the question of supplying drink to stock is as important as the supply of food. During the winter season stock ought to be watered more than once a day. He had found that his cattle will drink twice a day, and cattle will do better by being watered twice a day, while eating dry food in winter. For securing water he preferred a cistern to a well, on account of saving of the great labor of pumping water for a large number of stock. Even if water is forced up by a ram you would need a cistern or reservoir to store it in. Would make it large. If he had a stream with a good fall near by would have a ram and a reservoir. It would be just as well to have the latter large enough to catch the water from the roof. He did not approve of turning out cattle to water. They cut up the fields. In building a cistern he would make a permanent job of it. Would not use brick, but would make a good stone wall

James Lee preferred a good well, with an Oldfield pump. With his pump in a well 25 feet deep, he can supply enough water in 20 minutes for 50 head of stock. If compelled to make different arrangements he would have water in the barn-yard by natural flow.

B. Silver, Jr., said that all in all, a cistern is the best plan of supplying water at a barn ; but would have it large enough to never go dry. If he had a never-failing spring near by he would have a hydraulic ram. He would set a large hogshead above the watering trough in the barn-yard and run the pipe into that. Nothing gives more satisfaction than a ram, if you have the water to work it.

Thomas A. Hays also thought the best, cheapest and most convenient mode depended entirely upon the situation. If he had a spring not too far off and could get water by a natural flow he would not prefer any plan over that. Taking all things out and out, a cistern is the best and cheapest mode of supplying water in a barn-yard. He has a cistern, a ram and a pump. The cistern was built a year ago and cost $96. It is 9½ feet wide, 8 feet deep and 14 feet long. Arch brick were used, which were laid lengthwise against the bank, making a wall eight inches thick. The bats were laid flat in the bottom and cement run through them. Two coatings of cement were applied with a trowel to the sides and several washings of thin cement with a brush. Arch bricks and bats are cheaper than stone. The wall is built to the top of the ground, sleepers are laid and a floor over them. It never freezes. The cistern should be made large so as to hold enough water. It is cheaper and easier to water from a cistern than a pump, and he preferred a cistern to a ram.

Wm. D. Lee said if properly situated for it he would prefer a ram. Where he lives there is one that has been in use for 20 years. If he could not have a ram would have a cistern. It would be a good plan to have a ram and a cistern to hold water.

George R. Glasgow said that he would prefer a cistern, if he could have one conveniently. Has a pump in a well 26 feet deep, which works well. As he is situated he prefers a pump to anything else.

A. M. Fulford is using pumps, but thought other modes were more convenient. The best mode for each person depends on the location. The first cost of each makes little difference. If located so as to run a stream into the barn-yard by natural flow, that would be decidedly the cheapest and best in every respect. Next to that he would prefer a cistern, if he had sufficient roof to fill it properly. Would like to have the cistern so located that the water could be used from it by natural flow. He would next prefer a water-ram, but in order to have that you must have a strong stream. You must also have a reservoir to store water in temporarily when the supply by the ram is cut off. If the barn-yard is sloping, you might have several troughs, the overflow from one passing into the next lower. If he could not have that would have cistern with a pump in it. If the cistern is not deep the labor of pumping up the water would not be great. A wind-mill would next be chosen, but he thought them liable to be injured by storms. If he had a choice, at about the same price, would prefer a cistern, with natural flow from it, unless we could have a stream to supply water by natural flow. Cisterns can be built entirely above ground.

Harry Coale would prefer a ram with a good spring to run from. The danger with cisterns is their giving out in time of drought.

Thomas Lochary has not the least trouble. He turns his cattle into the bushes and they help themselves by natural flow. A pump in the basement of the barn is very convenient. If he had many cattle he would prefer a pump and cistern both, but with a small lot of stock a pump under the barn will answer. Cistern water is colder in winter than pump water, and cows do better when supplied with water not too cold.

Wm. F. Hays has a cistern and prefers that mode. The cost and re-cost of a well would soon amount to that of a half a dozen cisterns. The first cistern he had was built too late in the

fall and did not give satisfaction. The next May he built one of stone, lining it with brick and cementing it. It has cost nothing since. It is 11 feet wide, 13 feet long and 10 feet deep; built under ground on all sides except one. The latter faces the bridge way, and there the wall is 4 feet thick, the place having been a convenient one in which to dispose of stone.

Thomas A. Hays said he used half and half good sand and cement—cement and mortar will not make a good job, as the mortar takes too long to dry. He would advise a filter of soft brick and cement in a cistern to run the water through.

S. B. Silver said as soon as a cistern is cemented it should have water on the floor to prevent it from cracking.

Pleuro-Pneumonia.

The following resolution was adopted:

"Whereas, reports have been published that pleuro-pneumonia exists among the horned cattle in Harford county, therefore be it

"*Resolved*, That although the members of the Deer Creek Farmers' Club have no knowledge of a single case of pleuro-pneumonia or any other infectious or contagious disease among the cattle in Harford county, yet, considering the importance of this subject to the farming interest in the future, our representatives in the State Legislature and in Congress are hereby requested to urge such legislation in the respective bodies of which they are members, as may tend to prevent the introduction or the spread of this disease in our State or country.

A committee was appointed to make a thorough enquiry in regard to the matter.

Farmers' Purse.

A committee, consisting of Messrs. Thomas A. Hays, A. M. Fulford and James Lee, was appointed to solicit subscriptions for a special premium, to be called the "Farmers' Purse," to be offered at the next county fair for some particular kind of stock—the subscribers thereto to designate for what object they desire their contributions to be applied.

Election of Officers.

The annual election of officers then took place. Mr. James Lee was elected president, and Mr. Benjamin Silver, Jr., secretary and treasurer.

A vote of thanks to the retiring president, R. Harris Archer, and to the secretary, William F. Hays, was then passed, and the club adjourned to meet at James Lee's, April 24th.

The Gunpowder Farmers' Club

Met March 20th, at the residence of Edward H. Matthews. This being the first meeting of the club here, this gentleman having but recently become a benedict, and set up, in a beautiful situation, a modest but charming establishment of his own, the minutes were read of the last meeting on the same farm, which is worked by him in conjunction with his father, Jno. D. Matthews. The customary form of inspection was then made around the fields, grounds and buildings. The grain was found in good health and color, if a little less vigorous than before the wind and snow-storm of a few days previous. The grass fields were made objects of interest by reports of various applications in the way of fertilizers, especial notice being attracted to one spot on which a large dressing of bone-dust had had no perceptible effect. The farm buildings were found in good order, and the live stock, horses, fattening steers, milk cows and Berkshire swine, all gave evidence of careful attention.

Returning to the house, D. Gorsuch presented specimens of an apple growing in his orchard, origin and name unknown, a great bearer and good keeper, and of good quality. It was not recognized by any present, and the fruit was sent to Mr. Brackenridge for his opinion as to whether it is a seedling or a named variety.

Thos. Gorsuch read an article from Prof. Caldwell, of Cornell, on soluble and reverted phosphate. Heretofore in Belgium and France reverted phosphate has been reckoned as valuable for producing crops as the soluble; whilst in Germany and England it is generally rated with the insoluble. At the meeting, however, of Directors of Experiment Stations in Germany for 1879, a paper was read, summing up the experiments in pots and in the fields, as follows: Pot experiments for several years in clay and sandy soils, with oats, wheat, barley and peas, and field trials with the same, and with potatoes, rye, rape, fodder roots and Indian corn, on a clay marl, on a sandy soil, and on a reclaimed bog, all unite in showing these two forms of phosphoric acid have equal value as plant-food; and, furthermore, there is not a single experiment that clearly shows one is any less valuable than the other. Indeed in some cases the reverted has proved a better manure than the soluble, especially in sandy soils. In soils containing much lime or iron and alumina, the soluble phosphate soon passes back into forms difficultly soluble, and is thus saved from being washed out; in a sandy soil, with nothing to absorb and fix the acid, it is carried off.

The meeting was not fully convinced, and passed a resolution recognizing the value of reverted acid for soils of a certain character, and pledging further experiments to aid in the settlement of the question.

Prof. Caldwell suggests we can, in this country, aid in reaching this question by field comparisons of superphosphate, made from the same kind of insoluble phosphate, and containing the same total quantity of soluble and reverted phosphate, but in different relative proportions of the two.

A conversation on the use of old plaster disclosed that here, as elsewhere, this material had given greater effects as a manure than its constituents would seem to warrant. It was remarked that this probably was due to the presence of nitrogen, mortar having the power of absorbing that element from the air, it being used for this purpose sometimes in making nitre-beds.

The question of propriety of mixing hen manure and coal ashes was presented, and the

general testimony seemed to be favorable to it, though adverse to the use in such a connection of wood ashes, which free the ammonia.

What is the relative value of "lime-ashes" and lime?

J. Crother.—The ashes bought now at the lime-kilns at Texas are the core only. When lime was burnt with wood, instead of with coal as now, the ashes were worth as half as much as the lime.

Dr. M. Merryman read a formula for a corn fertilizer which had given 22 bbls. on the same soil, where the land, unaided, produced only 3 bbls. of nubbins. It contained potash, soluble phosphoric acid, but less ammonia than the ordinary super-phosphates.

Jos. Bosley said the way he had raised 25 bbls. to the acre was on a repeat. The first year the sod was plowed deeply, and he got but 12 bbls. to the acre, which he considered a failure. The following year he applied a mixture of hen manure, leached ashes and plaster (mostly plaster) in the hill and got 25.

D. Gorsuch said a popular corn fertilizer in the Pennsylvania counties bordering on ours, was a mixture of dissolved bones and potash,—no ammonia. Its use has yearly increased.

What part of chestnuts is best for posts? *a.* Second cut is better than first, and that nearer the limbs better still. *q.* What is average time chestnut posts will last? *a.* Thirteen years. D. Gorsuch said he had posts still standing 30 years old. *q.* What will last longest, white oak or chestnut? *a.* Old white oak.

The club during its session endorsed the necessity of a law for the suppression of pleuro-pneumonia in Maryland, and also passed a resolution favoring the diversion of appropriations by the State to the Agricultural College, which is of no benefit to the farmers, and their application to the establishment of an Agricultural Experiment Station, for which end the club will labor, in the belief that one properly conducted will be of as great use here as in other States where similar institutions are in operation for the scientific investigation of agriculture.

Cost of Producing the Oat Crop.

Messrs. Editors American Farmer:

I will not occupy your valuable space by detailing the cost of each operation in the seeding, harvesting and marketing of the oat crop referred to in your March number, but will merely give you the average cost per acre, which was within a fraction of $10.50, and embraced every item from beginning to end.

It has always been a difficult question for farmers to solve, what amount they should debit a crop with for the use of horses, men and implements. In estimating the cost of a crop, I have adopted the plan of charging $1 per day for each horse and each man employed, and letting that amount cover the use of implements also.

This I consider a fair charge, as it is the ruling rate in my neighborhood, and fully covers the expense of horse-feed, wear and tear on implements and horses, and the days during the year that men and horses are idle or unprofitably occupied.

To digress, I have always favored the five-year rotation of corn, oats, wheat and grass two years, for the reason that it gives the fullest occupation to men and teams in succession throughout the year.

I now come to the question of profit, the all important one, and find that the account shows as follows:

About 4,700 bus. oats @ 45 cts	$2,115
" 60 tons straw @ $8	480
Total	$2,595
Cost of production @ $10.5[illegible] per acre	1.155
Net profit	$1,440

Amounting to $13 per acre.

The value of the straw is estimated in the barn. It would have brought $12 to $14 any time this winter in the Baltimore market.

The oats are estimated at about the average market price to this date since harvest.

Some farmers, who may take the trouble to read this and the preceding article, will say that unnecessary expense was incurred in the seeding and harvesting of the crop; to these I will reply that I attribute the good yield to the thorough preparation of the soil and the drilling of the seed; and a very wholesome experience has taught me that the only safe rule for the farmer's guidance in harvest is to conduct every operation as if a deluge of rain was expected at any moment.

It is much cheaper to bind the oats while in good condition, and place them in hand-stacks, well capped, where they would be safe for several months, than to dry them after a heavy rain, to say nothing of the damaged straw and stained and musty oats.

I have tried every plan that I ever heard recommended, cutting with cradle or machine, and gathering with barley forks without binding, loading on wagon loose and hauling to barn at once, binding and putting up in dozens, and I have found the plan adopted in this instance the cheapest on the average. Very truly yours,

G. W. LURMAN.

Bloomsbury Farm, March 27th, 1880.

Work for the Month—April.

Where the farmer is now behind-hand with the spring work, the fault would seem in fairness attributable to other causes than the untoward season, for it has been long since so favorable a winter has been experienced for field operations.

Oats ought to be seeded as early as practicable, the rule being that they do much better than those gotten in late. A more generous treatment than is general would give better crops than are usual. A change of seed, especially when the new is obtained from the North, gives a product of heavier weight,—our climate seeming to cause the grain sown to deteriorate. See elsewhere the experience of Mr. Lurman.

The Corn Crop.—Thorough preparation always pays. Probably nothing is better for the crop than barn-yard and stable manure, which is

by some preferred to be turned under and by others worked in shallowly. Repeated harrowing ought to be persevered in until the soil is in a complete state of pulverization. For use in the hill nothing is better than a mixture of bone dust and wood ashes; a good super-phosphate, carefully applied, so as not to burn the seed; or a mixture of hen manure, plaster and salt. The land cannot well be too rich, but frequently the application of heating substances in the hill destroys the seed. [See Gunpowder Club proceedings.]

Local preferences generally determine the mode of planting, both as to distance apart and whether in hills or drills; but where close planting is followed a heavier degree of fertilizing is allowable than otherwise. So, too, on compact soils, and those rich in decaying vegetable matter, planting may be closer than on lighter land.

Soaking the seed in a solution of about two pounds of saltpetre to a gallon of water is adopted by some farmers as a preventive against attacks of insects, and others stir the seed in hot tar, a pint of which will thinly coat a peck of seed.

In cultivating the crop the use of the light smoothing harrow is becoming more in favor. It destroys the weeds without hurting the deeper rooted corn. As soon as the rows are perceptible the working ought to begin with the cultivator or shovel plows.

Sugar Beets and Mangels. — Every farmer ought to grow a small area in these,—of the former, to prepare himself for the time when the demand will come for them to make sugar; of the latter, because of their usefulness and health-giving properties as feed for stock. In our March number an experienced grower gave full directions for producing these roots, and we refer to his paper as containing useful information which we need not repeat here. The land ought to be in good heart, deeply plowed and finely pulverized. Sow in drills by hand, or by the help of a hand seed-drill, in rows 27 or 30 inches apart, working them faithfully with the cultivator as soon as the plants appear, thinning beets to stand 7 or 8 inches, and mangels 10 to 12 inches apart. About 4 pounds of seed is needed to the acre.

Carrots and Parsnips.—These ought to be sown early, and in the same way as recommended for beets. The rows need not be over 2 feet apart, and the roots may stand as close as 4 or 5 inches in the rows. The long orange-carrot is most popular, and the hollow-crowned parsnip. A good nitrogenous manure applied in the drill will give them an early start, which will be advantageous in pushing them ahead of the weeds.

Potatoes.—These ought to be planted early, the ground being thoroughly prepared. There are some promising new varieties offering, which it might be well to try, in anticipation of the decline in productiveness of the older favorites.

Tobacco.—The planters have finished making tobacco beds, we must presume; if not, that work must now be hurried to completion. The next thing to prepare for is the little tobacco fly, which proves so disastrous to the young plants.

We would recommend, as an experiment, Paris green.

Stripping tobacco should now be brought to a close as fast as possible. Tobacco hanging in the house begins to deteriorate during warm weather in May. Examine the bulks and see that they are all right.

Corn for Fodder.—This has now become so much of a standard crop, that almost every farmer who keeps even a few cows has forethought enough to sow an acre sufficient to supplement the pastures when they run short. Sow in drills about 2½ feet apart, and cultivate two or three times. About two bushels is enough seed for an acre, and the stalks should stand about ten or twelve to the running foot.

Sowing Plaster.—A bushel or two sown on the clover-field will bring a good return on many soils. Its virtue ought at least to be tested fairly.

Live Stock.—Now that spring is really here, and all kinds of farm work will be pressing upon us at once for immediate attention, do not forget that our live stock will still need as much care as at any time during the winter. It is supposed that by this date all of our breeding ewes have had their lambs Should there be any wethers or ewes without lambs, they should not be kept in the same enclosure with the breeding flock. The lambs should have their tails cut off when only two or three days old, as at that time the loss of blood will not be as great as when they are older. The buck lambs should be castrated when young, say from two to four weeks old according to circumstances. Avoid extremes in temperature for the operation. A small quantity of carbolic acid and glycerine (mixed in the same proportion as it is used for sores on man or beast) applied immediately with a small paint-brush to the wounded parts will be found of great benefit in starting the proper healing, and prevent unnecessary swelling. If the lambs have not been started to eating meal, lose no time in doing so; even a spoonful of meal will help; and in a few days after commencing to feed, the lambs' trough should never be allowed to be without some nice mixed bran and corn-meal to tempt the lambs to eat as much as possible. A nice lot of lambs well cared for from the time they are born, with an abundance of good grass to make the ewes have a good flow of milk, will be sure to attract some butcher or buyer for a city market: a first-class article, such as we have described above, will enable the farmer to dictate his terms much better than he can with such a lot as we often see from neglecting the castration and feeding.

We would recommend shearing the ewes *early;* this of course must be governed by the care we can give the sheep afterward. Cold weather will do no harm if they can be kept dry. As soon as the sheep are all sheared, wash all the old ones carefully with some good sheep dip to destroy the ticks or lice. After three or four days dip the lambs, as by this time the ticks will have learned that they can live better on a lamb than on an old sheep. In six to ten days the flock should all be gone over again, and by so

doing they will be well cleared of ticks and ready to lay on fat.

Turn cattle out as soon as the grass shows enough to give them a bite, even if it be a short one; but do not give any less of hay and meal on account of the little early green food that they can find; the grass will make them take an early start, and give a good appetite for dry food at the same time.

Fat cattle that are intended to be sold at once should not get any grass, or they will drift more if they have to be sent any distance to market before being weighed. Many of our most successful corn-growers reserve a sod-field for early pasture to save the other pasture-land for late use; and by hauling the manure on the sod will get a great amount of good early pasture and a better crop of corn, too, than would have been the case had the sod been plowed early without the help of the manure.

The Orchard and Fruit Garden.

As pruning, planting and plowing of orchards are all well-nigh finished up now, in this number of the *American Farmer* we propose to retrospect a little on what we will call *progress of improvement in varieties* during the last decade. And, as a majority of our fruit-growing readers are more largely interested in the Peach than other fruits, we will first notice briefly some of the changes and improvements in varieties of this fruit. Ten years back *Hale's Early* had no rival, and, until the introduction of *Beatrice, Louise* and *Rivers, Hale's* held the position of earliest; but these precocious emigrants roused the ambition of American growers to such an extent, that "ten days," "two weeks" and "three weeks earlier" than Hale's Early, became monotonous monotony in introductory descriptions of early peaches. From our experience with most of the quite early varieties, we believe the Amsden about as good as any,—all things considered. But just think of it! recently we have noticed that some party, bold in description, announces a variety "three weeks," yes, veritably "three weeks" (no days about it) earlier than *Amsden's*. This puts a quietus upon the candidate from Arkansas, (Gov. Garland.) Mississippi, too, is out of the race. This last digs her "Graves;" providing, however, that the description of this wonderful peach infant is not overdrawn. To return to the subject of improvement, we entertain grave doubts, after all of the numerous claims of interested parties to the contrary, if there is any single one of the dozens of quite early and *earliest* varieties now being disseminated, that are any better, if as good, as the Amsden's June. Passing to a period of the peach season less exciting, we find the Troth and Crawford's Early still holding a high position in popular favor; while the Mountain Rose has, in many places, crowded the Early Yorks entirely out of the list. Foster was expected to have served in a similar manner the Crawford's Early, but, thus far, it has fallen short of its mission. Reeves' Favorite and Mary's Choice still hold their own quite well; while the opinion of growers is, in some sections, somewhat divided as to the merits of Old Mixon Free and Moore's Favorite; the Crawford's Late stands unquestioned as to superiority for its season. Stump the World has waned in popularity, because of its capriciousness as to season of ripening. Still further on towards the close of the peach season, we find the Beer's Smock with more friends than any other one variety, notwithstanding the score or more of *new* kinds ripening about the same time. Now, to summarize the matter, we think the raising and testing of new varieties of this fruit all right and proper; but we would suggest to planters to move slow in discarding any known *good* varieties for untried novelties, no matter how high-colored the description. In *Strawberries* and *Raspberries* the tide of novelty is even stronger than with peaches. Every recurring season brings with it several varieties of "the largest," "the most productive" or "the earliest" strawberries; while regular *iron-clad* varieties of red raspberries have been rapidly following each other. In strawberries, we need not go farther back than the introduction of "the Monarch of the West;" of course *it* was by far the largest and best berry ever offered to market growers, (?) but its glory is soon eclipsed by "Star of the West," the twinkling of which is soon obscured by "the Great American;" this, too, meets a sad fate by the introduction of the world's wonder, called "Crescent Seedling," which was just the thing for those who wanted to make "lots of money" *without work;* for whether this variety had attention or not, immense crops of fine berries (?) were sure to follow anyhow; but alas! how vain are human hopes! for just as we thought we were embracing strawberry perfection, up stalks the most wonderful of all!—the Sharpless. Of course all danger is past now, but we will wait. With the red varieties of the Raspberries, it is none of your "Irishman's one-at-a-time" game, for "the best," "the very best," "the largest" and only *really hardy variety* despise loneliness, so much so that they come half-a-dozen kinds together, and just which variety to choose, to get *the best*, is as distracting to fruit-growing intelligence as was the "fifteen" to the minds of the puzzle-loving class.

In the production of new varieties of *Grapes*, (whose name is legion) we find a higher standard of skill guiding the efforts of the busy and energetic operators in this field of labor; though the results, as a whole, do not make a much better showing than is exhibited in the respective efforts of the peach, strawberry and raspberry devotees. Now the lesson taught by the rapid multiplication of new varieties of fruits is a plain one that comes home to every grower, viz: that instead of investing largely in uncertain novelties, with the selfish view of having "the best run" of a great fruit, which, nine times out of ten, ends in failure and loss, and hatred towards the vender of such high-colored varieties, expend the best efforts on only such kinds as you *know* to be good and profitable; give them the extra attention that is always lavishly bestowed upon the strangers, and disappointment will be the exception instead of the rule. Touch the novelties lightly until they prove themselves worthy of extended planting, which proof is not to be found in a single year's fruiting in the community where they originate.

The Poultry Yard.

By G. O. Brown, Montvue Poultry Yards, Brooklandville, Md.

Setting Hens.

This may seem a subject that all are familiar with, but there are a few who are not quite as well posted as they should be. To the latter we will address ourselves. As soon as the hen shows signs of being broody, which you will observe by her remaining a long time on the nest, and sometimes by clucking, then is the time to see that you have everything in readiness to place her where you wish her to remain. The nest box, which she has been accustomed to lay in, should be portable. After she has remained on the nest two nights and a day in succession, move her *nest and all* very gently *at night* where you want her, giving her china or hard boiled eggs, which, in case the hen proves a "frisky" one, will not be broken and teach her the bad habit of egg eating. If she will come off the nest in the morning, eat her feed, and return of her own accord, she can then be trusted with good eggs. The nest should be roomy, so she may turn around easily; about 14 inches by 16 is a good size, and not more than 7 inches high, so she will *not* have to jump down to get on. The bottom of the nest should have an inverted sod hollowed out so the eggs will not roll, scooped out somewhat the shape of the inside bowl of a spoon will give you the idea. A few handfuls of dry ashes, then *short* straw, and it is ready for the eggs. Hay is too great a harbor for vermin, and remember the straw must be short; for if long the hen is apt to get her foot under the straws, and muss up the nest. Where it can be obtained, moss makes the very best nest lining, its soft nature remaining spongy and yielding, while both straw and hay soon pack. Mark your eggs with *ink* when set, so you will know when they are due. Should, during the period of incubation, the weather be dry and windy, the eggs should be sprinkled with tepid water three times at least, say on 10th, 15th and 19th days. It is best done while the hen is off eating, by using a hair-brush dipped in the water, with which the eggs can be very evenly and nicely sprinkled. This is required, because the lining next to the shell, unless the moisture is furnished, becomes, so to speak, parched, and it is difficult for the chick to break it. This is often the reason why there are dead chicks in the shell, even that have pipped through with their heads and can make no further progress. Damping the eggs is especially necessary when the hen is confined, and has no out-door run. Some say when a hen steals her nest, how is it she hatches so well, and her eggs get no wetting, &c. A hen that steals her nest is most generally sure to have it on the ground; and in seeking her food, she usually goes abroad in the morning and returns to the nest considerably wet with dew, and the heat of the body, with her damp feathers, furnishes the moisture nature requires, besides the natural evaporation that reaches the eggs from the earth. On the sixth or seventh day go at night with a bright lantern and examine each egg, by holding it up between your finger and thumb, shading the upper portion of the hand with the other hand, and hold each egg up before the light, and you will readily observe all that have 'started" will be dark and cloudy; while, if there are any that yet remain clear, they are *sterile* and should be removed. Always place an uneven number under the hen—not that "there is any luck in odd numbers," but because an uneven number forms a perfect oval. See that a dust bath is provided, plenty of corn and fresh water. Some let them come off and go on at will. My plan is to have a regular hour to feed and attend to them. Some think, because they have sent off and purchased eggs of pure-bred poultry, they need some extra attention. It is not so, and many thereby spoil the settings which would, no doubt, have hatched well if not disturbed. Accidents will occur, and should an egg get broken over the others, they should be washed, by holding the egg in one hand and washing it carefully with a cloth. *Not* by "*washing*" it around in a basin of water. Always be gentle with the hens; in removing one from the nest carefully get her by the two upper parts of the wings close up to the body with one hand, and raise her up gently; she cannot then use her wings. Observe these simple instructions, and in due time you will have to care for a brood of

Young Chickens.

For the first 24 hours the chicks need no feed, but require air and warmth. The first food for a couple of days should be hard-boiled eggs, followed by bread crumbs; and the third day well-scalded corn meal, mixed to crumble, may be given. For the first four weeks feed early, often, and as late at night as possible. As fast as they are able to pick up wheat, it can be given them, also cracked corn; this should be their last food for the day. Follow around with fresh water after each feeding. A very good article to mix with their soft food for the rapid-growing breeds, is bone meal which is especially prepared for poultry. Chicks should as much as possible be given a varied diet; but, at each feed, only what they will eat up clean. After they are three weeks old, if so situated that the hen can run at large, let them "go it," and she will show them the little tidbits they so relish in the shape of insect food, and which makes them grow like weeds. It is well to examine the heads of the little chicks as soon as they are dry in the nest, and, in most cases, you will discern large lice. Grease the chicks' heads thoroughly, and the hen under the wings. As soon as they are all removed from the nests, the nests should be *burned in the boxes*. Always see that at night your coops are prepared to stand the sudden storms, or your chicks may be drowned. See that there are gutters around your coops to carry off the water so that none will run inside.

Keep an Account.

Farmers and others would do well to keep a regular book account of their poultry transactions. Charge the fowls with the food you give them, and give them credit at market prices for the eggs they furnish you, as well as what

fowls that are sold or eaten by the family. See which side the balance-sheet will favor. They will be greatly astonished to discover in most cases each hen has brought in over two dollars revenue, to say nothing about the value of the manure, which, if properly saved, exceeds in value the Peruvian guano. Try it and be convinced. G. O. B.

Poultry-House Architecture.—We have received this valuable work, by H. H. Stoddard, of *Poultry World*, Hartford, Conn. It is filled with cuts of houses, plans, coops, fences, &c., suitable for poultry, and is well worth 25 cents to any one.

The Grange.

The Farmer's Pursuit.

At a recent meeting of Fairlee Grange, No. 8, the following address was delivered:

Farming needs no eulogy. Learned men in all ages, philosophers, statesmen and orators, from Cicero to the present time, have done themselves honor, and "appeased the gods," by laying their good-will offerings on the altars of agriculture.

Tilling the soil is the first-born of civilization, the mother of wealth, as well as the heaven-appointed employment of man. Being the only independent vocation, therefore it is the most ennobling of all the pursuits of men. Agriculture is not the destined occupation of all men at birth; but I believe that it would promote the general happiness of society to inculcate this doctrine, and that he who forsakes it for other pursuits ought to show substantial reasons for the departure from so independent an occupation, to entitle him to encouragement. A man who possesses eminent mechanical ingenuity, no doubt had better be a mechanic. He who is fitted by nature and education had better be a public teacher. He who is born to be a distributor of the earth's products had better be a merchant. And he whose tastes and inclinations are to follow the professions, had better follow them. But all should show evidences of capability for the pursuit to entitle them to success due only to ability. In agriculture the Creator has furnished a safe and healthy employment for man. And to say that in point of health, wealth and happiness that farming stands pre-eminently above every other pursuit, I think is not overestimating it. As the most healthy, because of its hygienic advantages over other vocations. The farmer's habits, from necessity, cannot be sedentary; therefore, by his active life, he cultivates the physical as well as the mental faculties, and each growing and expanding together, must work in accordance with the laws that govern health. Another advantage for the promotion of health over others, is subsisting as he does on the very best and the freshest of his own products, prepared in the best manner, furnish as the farm does, and which to others must often be second-handed, manipulated, and, sometimes, very unwholesome. And the tables will show that farmers are not only the longer-lived but the most healthy of all classes of men.

In point of happiness there can be no question, although there has been much said by some about the worry, the care, the labor of farmers and farmers' wives. Yet, viewing it impartially, I think that the farmer, with his varied and diversified labor, living as he does from the products of his own honest toil, and also relieved from the monotony to which all other pursuits are subjected, having quite a large field to cultivate upon which to exercise his mind and to employ his time and improve his babits. These give him a world to himself, and also independence, which ought to make him feel as lord of all vocations. He is also aware that his pursuit is not only the most independent and ennobling, but that he also holds in his hands the very lives of the people, and from his toils and labors must the world be fed. The myriads of human beings that inhabit this world of ours are dependent upon the farmer for food and raiment. The farmer possesses other advantages for happiness: he is not a servant of the public; he is not compelled to stoop to please; he does not have to go or lose his practice, and also his bread; he does not have to undertake a case where there is no case, for fear of not becoming eminent in his profession; he does not have to work for fear of not getting work; and he does not have to oppress and distress like other men; because his pursuit is not a dependent one. The farmer alone can worship God under his own vine and fruit tree, none daring to molest or make him afraid. In point of wealth farming has advantages over other vocations. Take one hundred farmers and the same number of men of different pursuits, in ten years the probabilities are that the farmer will have amassed and saved more than the other class.

I know there are fields in which some have been successful in accumulating millions;—like Astor, Vanderbilt and Stewart. But they are few, and very few indeed, when compared with the tens of thousands who have failed and gone down in the vortex of bankruptcy, doing business in the same fields, and operating in the same channels of trade as they. There can be no question but that agriculture is the surest, safest and best road to prosperity. And summing all up, and viewing farming as compared with other pursuits of mankind without qualification, I have to say that farming is the happiest, most healthy, surest to wealth, and, consequently, the very best of the many pursuits of man. Perhaps I need to qualify, lest I be misunderstood. I do not mean that every one that lives on a farm, and who cultivates fruits, grasses, cereals, and stock of various kinds, should necessarily be called an agriculturist; no more so than that everybody who graduates at a medical college is a surgeon.

We find a great many false professions in the world; a great many pretenders and shams. We find many who do not honor their calling, and, I am sorry to admit, some among farmers. By the term farmer I mean the man who is making his business a study; by calling to his aid everything that may give him light, information and knowledge for the improvement of himself, his family and his farm,—one who avails himself of every opportunity of acquir-

ing such knowledge as may be beneficial to his occupation. The old fogy idea is exploded that we should send our brightest boys to college to learn the professions, and retain the dullest at home on the farm. To be a good farmer it requires the very best natural ability, the very best judgment and discretion, the very best education, the very best skill and industry, and every other essential that goes to make up a live and noble manhood.

The farmer having a large field for study and research, should he devote his lifetime to study, investigation, and the obtaining of practical knowledge, he would fail to have accomplished his aim.

The cereals, fruits, vegetables, stock of various kinds, grasses, poultry, dairy products,—each offer a field of itself for research and investigation.

And it is the man who is alive to these many obligations, and who, with enterprise and industry, is endeavoring to meet them, and who is leaving the first principles, (the ruts of his fathers,) and going on, (if not to perfection) by attending to and studying his business in its several details, that I mean by a farmer.

As I am speaking to-night to grangers, the question naturally arises, what has the grange done for the betterment of the farmer? Has it fulfilled its promises? Has it met our expectations? Have we as members reaped any advantages from belonging to this organization? I answer most emphatically, *yes*. Should the grange to-night be blotted out of existence, and should this be our last meeting, it would leave behind traces of good which time itself could not efface. Aside from the financial benefits, the teachings of brotherhood, of morality, of refinement, of sociability, alone, have erected monuments which will stand longer than the pyramids, and be as lasting as humanity itself.

Maryland Granges.

Queen Anne's County Grange, No. 4, has elected the following officers: M., A. E. Sudler; O., W. F. Bailey; Ste., J. L. Goldsborough; A. S., James Tilghman; Chap., E. B. Vandyke; Treas., Mordecai Price; Sec., C. H. R. Merrick; G. K., W. J. Clark; C., Mrs. E. B. Vandyke; F., Mrs. Frances Turner; P., Miss Nannie Tilghman; L. A. S., Mrs. Maggie Pardee.

Baltimore County Grange, No. 13, met in the hall of Mantua Grange, Mantua Mills, on Thursday, March 17th, at 10.30 A. M., Geo. H. Elder in the Master's chair and O. W. Gent, Secretary *pro tem*. A committee of five members was appointed to consider the practicability of the establishment of a Farmers' Hay Market in the city of Baltimore, and the following were named as the committee: Chas. W. Semmes, C. Lyon Rogers, Dickinson Gorsuch, Geo. H. Merryman and Wm. B. Sands.

Resolutions were adopted (1) expressing the interest and satisfaction felt in the address delivered by Gen. LeDuc, U. S. Commissioner of Agriculture at the Baltimore County Farmers' Convention of February 25, and commending his course in bringing his Department into closer relations with the farmers; (2) thanking the other speaker on that occasion, and calling for the publication of these papers; (3) calling upon the Legislature to divert from the Agricultural College, the results from which have been notably and entirely inadequate, the appropriations made by the State, and devote them to the establishment of an Agricultural Experiment Station, similar to those in operation in Germany and some States of this country; and (4) approving the course of the Governor of Maryland in his efforts to secure the abolition of compulsory State inspections and State weighers of all kinds of farm products.

A debate of agricultural topics followed, and a handsome repast prepared by the sisters of Mantua was duly enjoyed,

Montgomery County, No. 7, held its annual meeting on January 27th at Gaithersburg, the geographical centre and a highly-improved section of the county,—scores of houses having gone up since the completion of the Metropolitan Branch of B. & O. R. R. Its one deficiency —stone roads—is very much emphasized this open winter. In spite of this drawback, there were forty-five voting members present, besides a large number of visiting Patrons. Several amendments to the by-laws were proposed and other routine business transacted. Officers for the ensuing year were elected as follows: M., Jos. T. Moore; O., B. F. White; Lec., Wm. Hy. Farquhar; Ste., George R. Rice; A. S., John W. Horner; Chap., Jackson Day; Treas., John T. De Sellum; Sec., E. M. Lansdale; G. K., Robert Briggs; C., Mrs. Jos. T. Moore; P., Mrs. John McDonald; F., Mrs. W. L. Day; L. A. S., Miss Lou Tschiffely. In the afternoon W. State Master Devries addressed a public meeting on the necessity for farmers to coöperate to protect and promote their own interests, and showed how the grange organization had awakened respect for farmers as a class in the minds of the mercantile and manufacturing classes. Judge Wm. Veirs Bouic, who is a large and successful farmer, was called on and made a humorous speech, warning farmers against travelling agents, and advising them not to trust so implicitly to their muscles, but to exercise their brains more. L.

Jefferson, No. 167, Frederick Co. A public meeting was held on the 27th Feb'y, at Jefferson, when the officers named below were installed by W. State Master Devries, assisted by W. Secy. Sands, of Baltimore Co. Grange; M., G. T. Whip; O., J. S. Lakin; L., J. W. Remsburg; S., I. H. Culler; A. S., D. M. Culler; Chap., J. W. Long; Treas., W. H. Lakin; Secy., M. R. Rice; G. K., C. R. Horine; C., Mrs. M. C. Slagle; P., Mrs. A. A. Culler; F., Mrs. A. Horine. Addresses were delivered by the installing officers.

Crescentia, No. 57, Charles Co., has reorganized and elected the following officers: M., John G. Chapman; O., Wm. P. Compton; Lec., Hugh Mitchell; S., Isaiah Robey; A. S., W. A. Fowke; Treas., F. P. Hamilton; Sec., Wm. Boswell; Chap., John W. Albrittain; G. K., S. D. Robey; C., Mrs. John G. Chapman; F., Mrs. M. Chapman; P., Mrs. Hugh Mitchell; L. A. S., Miss. Emily Hawkins.

The Sower's Song.

BY CARLYLE.

Now hands to seed-sheets, boys;
We step and we cast; old Time's on wing;
And would ye partake of harvest's joys,
The corn must be sown in spring.

Fall gently and still, good corn,
Lie warm in thy earthly bed,
And stand so yellow some morn,
That beast and man may be fed.

Old Earth is a pleasure to see
In sunshiny cloak of red and green;
The furrow lies fresh; this year will be
As the years that are past have been.
Fall gently and still, etc.

Old Mother, receive this corn,
The seed of six thousand golden sires;
All these on thy kindly breast were born;
One more thy poor child requires.
Fall gently and still, etc.

Now steady and sure again,
And measure of stroke and step we keep;
Thus up and down we cast our grain;
Sow well, and you gladly reap.

Fall gently and still, good corn,
Lie warm in thy earthy bed,
And stand so yellow some morn,
That beast and man may be fed.

Home Department.

Marrying and Housekeeping.

The absence of any fixed rules relating to our domestic affairs in this free and easy age and country, is rather to be deplored in respect to those which concern the marriage and subsequent settlement of our young people. There is, of course, legal provision for the simple, brief ceremony; but beyond that, the only approach to social law is what each neighborhood, to some extent, recognizes as the fashion for the time. This, however, is so variable and so easily ignored, that it can, by no means, have the moral effect which the universal observance of customs, claiming a more general participation on the part of friends and neighbors, and giving the impression of public sanction and sympathy, would be likely to afford. A hearty interest in such occasions is so natural and spontaneous, that withdrawing one's self from the chance of its manifestation, seems like deliberate repression of the better feelings of human nature.

In former times it used not to be so in our own country, nor is it in these days in many other countries which we claim to have outstripped in civilization. It would seem as if, in this respect, we may have gone too far, and that a retrograde movement might be to our advantage.

Doubtless there are individual cases in which the privilege of seclusion from outside observation and participation is more agreeable to the parties immediately concerned; but as the public welfare is of more importance than individual tastes, it might be well for those who are in any degree responsible for the shaping of fashion in this matter, to have a care that it shall be regulated with due regard to the solemnity and dignity of the occasion, and with a view to the moral influence upon the community, and also that it shall throw around the young people every possible safeguard.

There are likewise unwholesome results worthy of our serious attention, growing out of the abandonment of old practices and adoption of new ideas in the nature of preparation which our daughters are expected to make for this important step. The average "girl of the period" looks to matrimony as her "manifest destiny," yet it has come to be considered quite indelicate for her to make any preparation with a view to it previous to an acknowledged engagement. It is easy to be seen how, in this way, much time, which usually is spent to so little purpose, is lost to the interests of their future home; but more serious still is the lack of a proper appreciation of the duties of married life, which is the inevitable result of a neglect on the part of their guardians to encourage frugal forethought in the habits and minds of the approaching heads of families in this our day.

The traditional old maid who ventured so far as to provide a *cradle spread*, is a standing jest with which to bring into ridicule any attempt to impress upon them the wisdom of providing for their future linen-closet and store-room in the disposal of their leisure, and exercise of their skill and genius during their girlhood.

Our foremothers, who mingled with their dreams of a future home the proud consciousness of piles of household linen and bedding, the fruits of their own industry, with which they hoped to complete its comfort and fitness, sacrificed neither sentiment or romance to these purposes. And no one will doubt that their hearts palpitated as genuinely and their cheeks glowed in as ready response to the approach of the little god, as do those of the less practiced girls of our day; and the much-ridiculed maiden of former times, who seemed to have wasted her efforts, was at least to be commended in the true womanly spirit which moved her to provide for a home in its best sense, and for which liberal provision she would doubtless put many of our girls to the blush, in spite of their elaborate personal decorations. The indulgence of the personal vanity of the bride and of some kind of unworthy pride of our own, by exhausting all our resources to provide her with a wardrobe, neither in keeping with the circumstances of her past life or of the life upon which she is about to enter, is a weakness so common that one's own sins in that respect almost compel silence upon the subject. It may be an amiable weakness of the home people, inasmuch as it is often the result of extraordinary self-sacrifice on their part; but in its effect upon the bride and upon the man who assumes her future keeping, it is, to say the least, a questionable kindness. Her trousseau is, in many cases, utterly unsuitable to the *home* her husband might honestly be able to provide, and then it often becomes the controling influence, whether acknowledged or not, that leads to the selection of a boarding-house as a substitute; there her fine clothes make a telling impression. She has abundant leisure to give them all the airing they require, and, moreover, she has no need of the domestic habits she has neglected to cultivate, nor of the household

linen she has neglected to provide. All this is in accordance with a vitiated public sentiment, and, for a time, everything moves on swimmingly. Their bark is launched upon the sea of life amid the plaudits of casual observers; but who regards the ballast or rudder, and who reckons the number of the wrecked?

The fact is, that this alternative of the boarding-house is the blighting influence that destroys the taste for home life and duties of so many people, especially of such as from indulgence or inexperience are incompetent to cope with the difficulties attending the management of a home of their own. It should, therefore, be a matter of conscience with whomsoever the choice rests that the first experiments in assuming the duties of married life shall be made under their own "vine and fig tree," even though it may cast a very small shadow and make the sacrifice of some personal indulgence and the overcoming of indolent proclivities necessary. So much of success and the happiness of their after-life depends upon making a right beginning.

It puzzles older and more experienced heads to rectify mistakes, made by undertaking a manner of living which they are unable to maintain, and few young people have the courage to look such mistakes in the face, or attempt to remedy them, until they are involved beyond a chance of recovery. Such failures are demoralizing in their tendency; and for that reason, if no other, should be guarded against by every possible care and forethought of their own and their advisers. Small beginnings, from which there is a chance for growth, are not only the safest but always afford the greatest amount of satisfaction. Every additional convenience or comfort is a new pleasure which fastens itself upon the memory as few others do. Mutual efforts to make the best of limited accommodations, and the exercise of ingenuity in mastering the difficulties of the situation, are great helps toward arriving at a thorough appreciation of each other. It is frequently said that the first year of married life is the most trying to the temper of both parties; possibly if they had less of leisure to indulge in its exercise, this might not be so. A busy life is unquestionably best for all, but especially for the young; yet, if the necessity for exertion is removed, how easily most people fall into habits of idleness. For this reason also is it best that beginners should have the responsibility of a home resting upon them. Later in life a relief from such cares may become quite as important; but young people in ordinary health, and under ordinary circumstances, need that kind of self-discipline which the incessant demands of home-life occasion, and I am almost persuaded that the more modest their beginnings are, the better for them, if they have the will to conquer.

Many a prosperous and happy pair who have come to occupy their mansions, and distribute their millions, could tell you that their day of small things, when they were put to their wit's end to make ends meet, and when they began by frugality and industry to lay the foundation for subsequent success, was by no means without its share of pleasure; indeed it is not uncommon for those days to be referred to as the happiest portion of their lives.

Whoever is so blest as to have their first home-making in the country, may in most cases make it, no matter how limited the nucleus for a more extensive one if circumstances should make it desirable; therefore it behooves them to have a care as to the location, in order that whatever is planted which grows in value as it grows in years, and surrounding conveniencies, need not be sacrificed to a necessity for change in the future. One may also, by exercising forethought, so arrange the smallest of houses, that additions will be a mere continuation of an original purpose, and thus avoid the undoing of anything already accomplished. This is always a piece of economy in making repairs, and one which, in our zeal, we are too apt to lose sight of.

Another happy result of this precaution is the retaining of the home to which they have become attached, and which can hardly fail of possessing associations which will be the better for keeping before them. Those of us whose happy lot it has been to pass our childhood in the same home where we first wakened to a consciousness of it, or better still where our parents could, for our benefit, recall many incidents of their own past, as connected with surrounding objects, know the delight of such privileges, and many of us can trace their good effect upon our after lives. If it so happen that we can also recall the gradual development of that home, the pleasure of each added beauty or convenience will never be lost to us.

Which of us, who are mothers, would not rather look forward to our daughters being so placed, that a home worthy of being held in honorable memory might be the object of their ambition, with reasonable expectation of its accomplishment, rather than that, like the butterflies of fashion, they should pass their early womanhood in the mere search for personal pleasure, which too often results in disappointment, wasted health, and premature age. If, then, the founding of a home be a desirable object, let us teach them to look forward to and prepare for it; instead of the superabundance of wearing apparel, substitute provision for their homes. Such provision would readily gain the sympathy of interested friends, and their bridal gifts would thus, perhaps, take the shape of additional comforts, instead of the ornamental lumber with which so many find themselves overladen. Moreover we may, by thus having an eye to their future comfort, as well as by encouraging a just sense of what is *consistent* with the circumstances of the man they marry, help them both to start upon the right track. We may then not only let him see that we expect our daughters to be properly cared for, but we may exact such care from him. Our daughters are too often left wholly to the tender mercies of men who know nothing of mercy, and they, poor things! are too proud or too shy to appeal to their parents. There ought to be some law, civil or social, that would secure the wife from the overbearance of respectable (?) heartless men. I am, however, wandering from my subject, and will therefore close it, with the hope that it may not continue to be true of our generation, that "they begin where their parents ended, and end where their parents began."

CERES.

Home Interests.

The Home Interest Society met at Rosenau, September 20, 1879. There were quite a number of members absent, which was partly owing to the recent decease of one whose peaceful and upright life was a sermon,—unworded, but no less worthy of all honor and imitation. As we drove up to the very pretty situation upon which this home stands, we noticed several pleasant things. First, quite a good road from the front gate to the house. Some who live a third the distance from a highway are either not so fortunate or not so painstaking. Which?

Years ago, on our first visit here, our hostess bemoaned the clay-banks around her doors; now, if the vernal carpet be not the Axminster of sod, it may, at least, be termed *In-grain*. The large herd of sleek cows feeding on a hill, the young trees beginning to cast a shade, a most complete dairy, the beautiful vines in which both porches were embowered, and, lastly, the cutest little flower-garden imaginable, must all receive mention in these records, for they deserve it.

Near the meat-house stood a most convenient looking boiler, which must render soap-day a comparative luxury, instead of being the sum and substance of all that is unsavory and disagreeable.

On returning to the house after our walk, the following topics and questions were discussed: "When shall I move Lily of the Valley roots?" "Now is a good time." Take up the roots of an "Elephant Ear" before the frost kills the leaves, and do not let them grow through the winter.

"Shall I stir cream, or take off the top on churning-day and throw it away?"

Most of the dairymen present appear to be stirring creatures, though some are not in this respect. Good butter appears to be made both ways, and those who pursue the new method must waste a great deal of good cream in the course of a year. We hope the members will experiment and give us the result of their experience.

"What kind of soft yeast will keep sweet longest?"

That made by grating 4 raw potatoes, pouring thereon 1 quart of boiling water, adding a half teacup each of salt and white sugar. When cool, lighten with sweet yeast, removing it from near the stove when it has fairly commenced to lighten. It should be covered with foam in a few hours, and then keep it in a cool place.

"When to pick apples and how to keep them?"

Gather early, say the last of September for most kinds, and keep them cool and dry. Should they freeze, do not disturb them at all until they have thawed."

The earth in flower-beds should be changed at least once in two years.

Geraniums kept pruned will remain small and bloom profusely.

"What improvements would you suggest in our county fair?"

Let it be held two days only. Increase the premiums on useful articles by subscription. Have more premiums for preserves and pickles, and a higher one for bread. Allow anyone to come in free who enters six articles Place the household things of one class together. Put the cases back to back in the middle of the hall, and hang the everlasting quilts against the wall, or, one member suggests, out on the trees and fences. That there should be a just schedule of prices for feeding horses on the grounds. That there be two extra marshals on duty in the hall to get the committees together promptly, and that the public be excluded therefrom until after 12 o'clock on the first day. All of which will doubtless have as much effect as St. Anthony's sermon to the fishes, for we read:

"When the sermon was ended
The good man descended,
And the eels went on eeling
And the pikes went on stealing—
The crabs were back-sliders
And the stock-fish thick-siders—
Much delighted were they;
But each went his own way."

Both our readers being absent, we filled out the evening with pleasant chat and adjourned to meet at Leawood in October. MRS. N. E. D.

[Our correspondent, who kindly furnished the above at our request, will, we hope, let us hear further of the proceedings of the association.—EDS.]

Philadelphia Letter.

Floral Decoration—Tropical Display at Small Cost—Flowers in Fashionable Costumes—Leading Styles.

Changeful, blustering March will soon give place to genial, showery April. Floral catalogues begin to be studied with interest, and changes in the garden discussed and planned. Philadelphia, as a city, is more awake on the subject of house or window decoration than Baltimore. Some of the leading hotels have long lines of windows facing principal streets, and in every one of those on the first floor is a good display of large-leaved, showy plants. This arrangement makes a complete revolution in the appearance of the hotel, and is also exceedingly effective in house ornamenting. Very few persons have any idea at what small cost and trouble a handsome tropical effect may be produced if the right plants are selected. Even if you have only a very small space around your door, or if your garden is all paved, you can have half a dozen half-barrels, tubs, or large boxes, set on extra bricks to raise them a little from the ground, and in these grow a Caladium esculentum, several Cannas, and species of Ricinus. The Caladium is a bulb, and requires plenty of water, given several times daily, and partial shade. Cannas may be raised from seed after some days soaking in very hot water, but will be large enough to make good display the first season only if gotten as roots from a gardener. They like sun and warmth. The Ricinus is a bean; sow early after the weather is settled, and cut off all the side shoots as it grows, so as to have only a circlet of gigantic leaves at the top. This gives it a palm-like appearance, as the tree grows very high. Some of the lady readers of the *Farmer* would have enjoyed a sight I had lately in the superb establishment of Homer Calladay & Co., the fashionable resort

millionaire portion of Philadelphia. Here are marvels of embroidery from French looms. The machines turn out pieces of embroidery four and a half yards long, which, when finished, are perfectly brown in color. They are bleached afterwards. Look at those dainty forget-me-nots in this Swiss goods. How can machine needles be made to work the different parts of each delicate blossom with such unerring accuracy? India silk muslin or mull for scarfs and overdresses might be worn by fairies, it is of such gossamer texture; graceful sprays of fern leaves seem as if really laid over these brocade silks; Lyonese patterns in bluish sapphire, silver and brown-gold flowered, and others in which a great number of colors are blended, excite our wonder, but none are so lovely as those in leaf and flower designs. Some suits are a thousand dollars, the trimmings making them cost so much. Bead or bugle trimming, which is profuse, is here at twenty dollars per yard. Some is in variegated colors of wonderful beauty, looking more like the dazzling Brazilian butterflies and gorgeous beetles in those famous Centennial cases than any thing we can liken them to. The recent Spanish marriage having brought up Spanish points, we have them in laces. Cobweb handkerchiefs cost a hundred and fifty; but the present style is less extravagant, colors and embroidering being more used.

Dainty infant robes for christenings are here, in which only the muslin has been wrought by machine, nearly all the rest by hand; and what labor it represents. Covered with this inappropriately-styled cashmere braid or fringe, one would look as if blazing with precious gems. Even to touch these small Persian and India shawls gives one a sensation of pleasure, they are so dainty and fine; and many of us will do no more than touch. Everything old and quaint seems stylish. Embroidering in all styles will be the rage. Children's hose are ribbed in alternate white and gold, garnet and gold, blue and gold, etc. There are spun silk shawls in solid colors, and in shepherds' plaids, with Persian ones in palm-leaf and oriental colors. A new chuddah pattern has a figure in Persian embroidery in the back and a small one in each corner. White dresses, mulls and crepes are fashionable or to be fashionable with dress goods of soft clinging fabrics. Lace will be used on every article of dress it is possible to trim with it. Small bouquets will be the style—natural ones preferred. Small yellow chrysanthemums and daisies are popular. Creamy tea-rose buds are coveted, and sprigs of rose-geranium leaves.

MRS. J. B. MOORE BRISTOR.

Philadelphia, March, 1880.

Hygiene.

HEALTH AND COMFORT OF THE AGED.—[Our well-known correspondent, J. Fitz, of Albemarle Co., Va., in a late number of the *Jeffersonian Republican*, presents some points upon health so much in accord with our own observation and experience that we are induced to transfer them to the health department of the *Farmer*.]

The following requisites necessary to the health and comfort of aged persons are inexpensive. Their wants are few; yet, how very important that these should be provided:

First, as to diet. Old people are as children in many respects. They should have nourishing food at regular hours, and at any time their appetite demands it. The food should be generous, nutritious, and well cooked.

Second. Exercise is essential. When the weak, tottering limbs finally refuse to perform their office, their remaining days are few. All old persons should walk, work, ride, or exercise in some way every day if possible, but so as not to induce fatigue or reduce their vigor. The exercise of the mind is scarcely less important than that of the body. This is a well-established fact. Reading, or literary pursuits, with prudence, may be continued to an advanced age, with a serene, unimpaired mind.

Third. The clothing should be suitable to the climate and season, and conform to the comfort of the individual; but, generally, all-woolen goods should be worn. Old persons are easily affected by cold, and a sense of chilliness is often present with all lean persons. If cold has been taken, warm tea, or even a brandy stew, would not hurt, if administered as soon as the symptoms appear.

Fourth. The room occupied by the aged should have an open fire-place, with fuel always convenient. It should have sufficient sunlight. This is an advantage as to health and cheerfulness, and aids the impaired vision of the aged in any reading, writing or work. It should be close and warm, yet capable of being well ventilated, so that the temperature can be regulated at pleasure.

Fifth. The bed and furniture should be comfortable—lightness is an important requisite in the latter, both as it regards the sick and the aged. "Weak persons are invariably distressed by overweight of bed clothes." For this purpose soft blankets alone should be used in winter, with a light spread or counterpane on top; and all should be frequently aired.

How important are the above conditions! They need not be expensive; and when our friends depart, how consoling and pleasant to reflect that we have not been remiss in our duty.

WEARING FLANNEL.—Put it on at once. Winter or summer, nothing better can be worn next the skin than a loose red woolen flannel shirt; "loose," for it has room to move on the skin, thus causing a titillation which draws the blood to the surface and keeps it there; and, when that is the case, no one can take cold; "red," for white flannel fills up, mats together and becomes tight, stiff, heavy and impervious; "woolen," the product of a sheep and not a gentleman of color, not of cotton wool, because that merely absorbs the moisture from the surface while woolen flannel conveys it from the skin and deposits it in drops upon the outside of the shirt, from which the ordinary cotton shirt absorbs it, and, by its nearer exterior air, it is soon dried without injury to the body. Having these properties, red woolen flannel is worn by sailors even in midsummer.

The American Farmer.

PUBLISHED ON THE FIRST OF EVERY MONTH

BY SAML. SANDS & SON,

At 129 W. Baltimore Street, (sign of the Golden Plow,) Baltimore, Md.

WM. B. SANDS, Proprietor.

SAML. SANDS, WM. B. SANDS, } Editors and Publishers.

SUBSCRIPTION, $1.50 a year, in advance. Three copies will be sent for $4, and any person sending five names and $5 will receive an extra copy *free*.

ADVERTISING RATES.

	1 *Mo.*	3 *Mo.*	6 *Mo.*	1 *Year.*
One Square, 10 lines.....	$ 1.50	$ 4.00	$ 7.00	$ 12.00
Quarter Page.....	6.00	15.00	22.50	35.00
Half Page.....	12.00	25.00	40.00	70.00
One Page.....	20.00	45.00	75.00	120.00

Cover Pages subject to special contract.
Transient Advertisements payable in advance—all others quarterly.
Advertisements should reach us by the 27th of the month, to secure insertion in the succeeding issue.

BALTIMORE, APRIL 1, 1880.

Additions to Clubs.

Our friends will please to remember that additions may be made to clubs already forwarded, at any time, at the club rate.

We tender our thanks to those who have so kindly made up good lists for us; and we call upon all who are interested in the spread of sound agricultural knowledge to do likewise, and thus contribute to the advancement and improvement of agricultural science and practice, benefit their neighbors and their own communities, and, at the same time, give a helping hand to the *Farmer*.

Death of Col. John R. Emory.

We record, with deep regret, the decease, March 28th, of this eminent citizen of Queen Anne's. He was educated as a soldier, and served for a number of years in the army, yet on taking charge of his productive and beautiful paternal estate he proved himself a progressive and successful farmer, his crops of wheat raised during the Crimean war being almost marvelous in their extent and profits. Col. Emory was devoted to improved stock, and introduced many fine animals upon his farms. He took an active interest in the grange movement upon its introduction into Maryland, and was for several years a member of the executive committee of the State Grange.

As we go to press, it is impossible to say what legislation affecting agricultural interests will be perfected by the time the Legislature adjourns. The fate of bills changing the system of tobacco inspection, the weighing of cattle and hay, have not yet been decided. That for the suppression of pleuro-pneumonia among cattle has passed the Senate, and been favorably reported to the House by its Committee on Agriculture. The bill to establish a State Elevator for Maryland grain will doubtless fail. Events early demonstrated there was no chance whatever of the passage at this session of a law for the creation of an Agricultural Experiment Station. The bill prohibiting the sale of oleomargarine, or imitation of butter, for consumption within the State, was lost. The bill offered in the Senate by Mr. Peters, of Montgomery, for the inspection of fertilizers, with very stringent features, has been defeated. The laws giving appropriations to agricultural societies have all been repealed. The charter of the Agricultural College has been amended by increasing the number of the State's and reducing the stockholders' trustees, and the bill to sell out the State's interest in the property failed. The annual subsidies to the College were stricken out of the appropriation bills as they passed the House.

Catalogues.

ELLWANGER & BARRY, Rochester, N. Y., the widely-known nurserymen, issue new catalogues of Fruit and Ornamental Trees, and a Strawberry Circular with minute instructions for cultivation. All these contain much new and instructive matter of great value to amateurs and growers for market.

JOHN SAUL, Washington, D. C.—Catalogue of plants for 1880, comprising an immense variety of Greenhouse, Store and Bedding Plants, including all the novelties of this and past seasons, and ornamented by a gorgeous plate of Jules Chretien and Marie Van Houtte roses.

A. BRACKENRIDGE, Govanstown, Md.—Price-list of Plants and Strawberries. A compact and well-filled pamphlet.

ROBT. J. HALLIDAY, Baltimore.—Catalogue of Plants for 1880, including all the new sorts lately sent out.

REVIVED GRANGES IN MARYLAND.—Since the meeting of the State Grange, the following dormant granges have been revived: Principio, No. 152; Harford, No. 118; Middletown, No. 97, and Eureka, No. 11. Each of these has been visited by the new Master, H. O. Devries, who is traversing various sections of the State, and who reports a general good feeling among the members of the order.

Portable Steam Engines and Saw Mills.

Among the many improvements which have been made and introduced of late years to the public for the saving of labor, and as aids to public improvement, none have been found to supersede the Portable Saw Mills and Steam Engines of Geo. Page & Co. of this city, which almost ever since our first connection with the agricultural press, (now about forty years,) we have been almost steadily advertising in the pages of the *American Farmer*, and largely through which instrumentality there is scarcely a section of the whole South where these machines have not been introduced, and the demand has never ceased,—embracing, as these and many others of the inventions of this old establishment does, some of the most valuable machinery of this utilitarian age. The founder of this great establishment was fortunate in leaving successors with the talent running in the same vein. It was with the then new saw mill of Page, we remember, that our ever-lamented friend Calvert undertook to supply the railroad to Washington with the cross-ties for the bed of the road, which were furnished from the timber on the extensive estate of Riversdale, near Bladensburg, upon the management of which he had then but recently entered as proprietor, and from which source the ample fortune of the family was greatly increased by his energy and the well-directed talent which he possessed far beyond many of his cotemporaries.

The Leffel Turbine Water-Wheels.

Whilst we are on the subject of machinery, we must refer to the advertisement of Messrs. Poole & Hunt, of this city, who are among the largest manufacturers of machinery in this city, and whose fame in the distribution of their celebrated improved Leffel Turbine is recognized to the utmost bounds of our widely-extended Union. Such establishments as these we have noted above add greatly to the wealth of any community, and their proprietors are worthy of all honor and the commendation of the public in whose midst they give employ to so many of our mechanics and other laborers.

SAML. HINKS, JR., of Frederick Co., has been appointed Grange Agent in charge of the house in Baltimore, vice H. O. Devries, resigned and elected State Master.

Look Out for Swindlers.

In some parts of the country pretended census-takers are obtaining signatures of persons to supposed census reports, which are afterwards so altered as to become notes of hand, which find their way for collection into the hands of banks and innocent holders. There is no necessity for signing any statements given the enumerators, whose work does not commence until June, and who ought to have ample credentials of their positions.

Agricultural Machinery and Implements.

Another of our enterprising citizens, Mr. Joshua Thomas, whose advertisement, with others, is to be found in our advertising pages, is worthy of special notice. In addition to his Eclipse Agricultural Engine, his specialty is in the sale of all kinds of harvesting machinery, such as mowers and reapers, their threshers and cleaners which bear off the premium everywhere, self-binding harvester, grist mills, pumps, plows, &c. Our friends who may deal with Mr. Thomas may, we fully believe, with all confidence, order from him anything in his line with the assurance of being fairly treated.

Cotton-Seed Meal.

Inquirers who lately addressed us to know where this article could be had in this market will now find it advertised by Messrs. A. L. Boggs & Co. This meal is a valuable feeding material, better and cheaper in some respects than oil-cake, and used with care is especially suited for dairy cows. A testimonial Mr. Boggs showed us from a well-known gentleman in the suburbs of Baltimore states that its use increased the milk of his cows from fifteen to twenty per cent.

☞We call special attention to the Soluble Phenyle, or Little's Chemical Fluid, which Mr. T. W. Lawford advertises as a sheep-dip, and we refer in connection therewith to the letter of Mr. Lea, of Montgomery, who has tried it on his sheep.

Look at the Pump.

I would like to mention that since the substitution of a new pump here last summer for an old decayed one, the water that for years before was unfit for drinking purposes has tasted sweet and good. J. WATSON.

Received.

From J. C. McCurdy & Co., Philadelphia—"Farming for Profit," by John E. Read. A very handsomely gotten-up volume, illustrated with a large number of plates and engravings, and treating of Agriculture and Mechanics, Live Stock, Fruit-Growing, Business Principles and Home-life. The author draws largely upon well-known authorities, to whom he acknowledges his indebtedness, and gives much matter which may be read with interest and profit—Descriptions of a variety of well-known labor-saving machines make up a prominent feature of the work, which is sold by subscription, and price not stated.

From the *Commissioner of Agriculture*, U. S. Department of Agriculture Report for 1878.

The Future of our Republic.

Messrs. Editors American Farmer:

Looking back upon the year just passed, with grateful acknowledgments for the munificent blessings it has conferred upon us; we greet you on the threshold of a new year with strong hopes that as a nation we are entering upon a career of unexampled prosperity. We have passed through a decade of trying realities, in which the "dark clouds so long upon our dwelling lowered" that we began to lose faith of their ever being lifted; but, thanks to a kind Providence, we bask in the sunlight again, with renewed vigor and ardent hope. The shipwrecks we have experienced in the last ten years should suffice to warn us of the shoals and quicksands, and enable us to steer our vessel clear to our anchorage.

We see nothing in the way of a continuous advancement, save what may accrue from our own folly, viz: a relapse into a state of speculative excitement, which engendered our first defection, and the unholy ambition of political aspirants, who in all ages have at times overturned the well-matured plans of virtuous, patient and toiling millions—worthy of a better fate. Under the guidance of Providence we trust, however, that wise councils may prevail; that our ship of state may ride successfully the discordant waves in her pathway; that we may continue to the end of time to be a *republic*, honored of heaven and a safe asylum for the weary and oppressed of all nations. Not forgetting the sad financial lessons of the past, if we wish a continued prosperity we must be patient and frugal, honest and industrious, and not let the flood-tide of prosperity drift us into the quagmire of despondency and helplessness; but make haste slowly, with an eye ever to the helm, a strong faith in God and our own efforts.

As a nation we are peculiarly blessed above *all others;* our shores being laved by the waters of two great oceans, no necessity exists for large standing armies, whose maintenance even in times of peace would mar the commercial importance of our people, and at the same time oppress us with a burdensome, ruinous taxation; we have no neighboring frowning battlements to overlook our peaceful avocations; no pent-up Utica contracting our powers; but a smiling, happy continent is ours.

We have a soil of unsurpassed fertility, varied in the charm of its land-cape, and so extravagantly rich in its productive capacity that its past two years' yield has bewildered the nations of the earth in viewing the grand summary tables of our ingathered yield, and have taxed even our own fertile resources for storing and carrying capacity. Our exchequer is gorged to completeness and our financial system second to none Our South (in which your journal mostly circulates) is on the road to prosperity; her manufacturing interest is being rapidly developed, and if our people of all sections will eschew political excitement and labor as hard to build up the *material* prosperity of the country as they do to advance their political preferment, and oftimes unholy ambition, we will as a nation soon ride upon the topmost wave of successful experiment, and win the respect and emulation of all others. There is, doubtless, a grand future awaiting us, and if we be true to ourselves with the advantages presented us, we will bequeath to our children a heritage of untold wealth and an example worthy of emulation. Brethren of all sections, let us cease our sectional bickerings, our *over-zealous* party proclivities, our unholy animosities, and let us individually and collectively strive to still further enhance the growing commercial importance and happiness of our people. Take the tide at its present flood-tide of importance and A. D. 1900 will exhibit to the admiring gaze of a wondering world a young republic of gigantic proportions, teeming with its 100 millions of contented, prosperous citizens; but if in an evil hour we shall listen to bad counsel and essay to build upon the ruins of a once happy republic a moneyed oligarchy, we shall deserve what we shall reap—the direst evil which the offended majesty of heaven can inflict.

Yours repectfully, Jno. D. Thorne.
Littleton, N. C., January, 1880.

Friend Miller's Rusk.—Two pounds of sugar beaten with 3 eggs, 1 quart of new milk boiled, in which melt ½ lb. of butter, and pour on the eggs, stirring briskly; add nutmeg, salt, a teacup of yeast, and flour to make a batter. If this is done at noon, they should be light enough to work into a soft dough by 9 o'clock. Knead thoroughly, and the next morning roll out, cut into shapes, and put them to lighten again. When light, bake in a hot oven about 20 minutes; cover with paper, open the doors, and allow them to stay in the stove about 5 minutes longer. Just before taking them out, rub over the tops with a little sweetened cream, which will give them a pretty glaze. T.

Bread Pudding.—Soak a pint of stale bread crumbs in a quart of milk. Add two tablespoons of melted butter, a little ground cinnamon, a tablespoonful of sugar, a few raisins, three beaten eggs, and a tablespoonful of baking powder. Put all into a buttered dish and bake immediately. Serve warm. B.

Kind Mention of the Farmer.

As specimens of extracts from our correspondence, we give the following:

"I think the *Farmer* is *the* best agricultural publication in this country."—W. M. EVANS, *Amherst Co., Va.*

"Your paper is growing in favor with us most decidedly, and accomplishing much good. Some who a year ago laughed at agricultural papers, read and study the *Farmer*, and express much satisfaction with its character and teachings.—EDWIN A. DITTY, *A. A. Co., Md.*

Please let me know if my subscription to the *Farmer* expires, for I cannot give it up. I have learned a great deal from it and still find it improving.—C. P. ALLSTON, *Georgetown Co., S. C.*

And the following from the press:

"It is one of the best agricultural works in the country, and no farmer should be without it."—WATCHMAN, *Union, W. Va.*

"The *American Farmer*, despite its weight of years, is as spry as ever. It has vigorous blood in its veins."—*Nelson (Va.) Examiner.*

"Brimful of useful agricultural matter."—*Fredericksburg (Va.) Recorder.*

"As good as usual, (only a little better,) full of sound and useful advice for farmers."—*Dore's Delewarian.*

Dr. Richardson says that the body should be in its best physical condition at forty years; for thirty years after, the organization should become more perfect; at seventy old age should begin and last for fifteen years, when, from eighty-five to one hundred, there should be ripe old age, without disease or pain, but marked by a general subsidence of the vital functions. This is his ideal limit of life where it has run its undisturbed course.

Contents of April No.

Reclaiming Sedge and Pine Lands, by R. B. Farquhar.....125
The Making, Saving and Application of Barn-Yard Manure, by D. Gorsuch.....126
Soils, their Origin, Characteristics and Treatment, by J. T. Councilman.....126
Beet Sugar, by Samuel Eccles, Jr.....128
Management of Tobacco in Lancaster Co., Pa., by J. M. Frantz.....130
Lancaster Co. Tobacco in Maryland, by L.....132
Our French Letter.....132
Valley of the James, Va., by Wm. Holman..133
Herefords vs. Short-horns in Queen Anne's, by Centreville.....133
A Good Sheep-Dip, by Thos. J. Lea.....135
Jersey Belle of Scituate, with cut.....135
Jersey Bull Le Brocq's Prize.....136
Polled Cattle.....136
Hog Cholera.....136
Cecil Farmers' Club.....137
Ammonia—Its Loss by Evaporation.....137
A Prize Farm.....137
Pleasure Grounds and Greenhouse for April, by W. D. Brackenridge.....138
Langford Seedling Apple, by H. A. C.....140
Fig Culture, by G. F. Needham.....140
The Crescent Strawberry.....140
The Lady Washington Grape.....140
The Stump Apple (with cut).....141
Pear Blight, by W. D. Brackenridge.....141
Maryland Horticultural Society—March Show.....143
Floral Novelties and Stand-bys—Forcing Asparagus, by W. F. Massey.....143
Gardening Then and Now, by J. W.....144
Tea Roses, by C. H. Snow.....144
Cabbage Plants—Celery, by Chas. E. Sanford.....145
Vegetable Garden for April, by John Watson.146
Deer Creek Farmers' Club—Supplying Water to Barn-yards.....146
Gunpowder Farmers' Club.....148
Cost of Producing the Oat Crop, by G. W. Lurman.....149
Work for the Month—Oats, the Corn Crop, Sugar Beets and Mangels, Carrots and Parsnips, Potatoes, Tobacco, Corn for Fodder, Sowing Plaster, Live Stock.....150
Orchard and Fruit Garden.....151
Setting Hens, Young Chickens, Keep an Account, by G. O. Brown.....152
The Farmer's Pursuit.....153
Maryland Granges.....154
The Sower's Song, by Carlyle.....155
Marrying and Housekeeping, by Ceres.....155
Home Interests, by Mrs. N. E. D.....157
Philadelphia Letter, by Mrs. Bristor.....157
Hygiene—Hints for the Aged—Wearing Flannel.....158
Additions to Clubs for *Farmer*; Death of Col. John R. Emory; Legislative Proceedings; Catalogues, &c., received; Agricultural Machinists of Baltimore; Look Out for Swindlers; Cotton-Seed Meal; Recipes; The Future of our Republic, by Jno. D. Thorne.....157, 160, 161, 162

Baltimore Markets—March 31.

Breadstuffs.—*Flour*—There was very little business in Flour to-day, and we write the market dull, weak and decidedly lower to sell, though quotations are nominally maintained: Howard Street Super $4.00@4.75; do. do. Extra $5.00@5.75; do. do. Family $6.00@6.75; Western Super $4.25@4.75; do Extra $5.00@5.75; do. Family $6.00@6.75; City Mills Super $4.00@4.75; do. do. Extra $5.00@5.75; do. do. Rio brands Extra $7.00@7.25; Spring Wheat Family $6.00@6.25; Minnesota Patent $6.75@7.50; Patapsco Family $7.50; do. Extra $7.50; Chesapeake Extra $7.10; Orange Grove do. $6.50; Fine $3.25@3.75; Rye Flour $5.00; Corn Meal, City Mills ₩ brl. $3.00; do do. City Mills, ₩ 100 lbs. $1.35; do. do. Western, do. do. $1.25; Western Corn Chop $1.05@1.10.

Wheat.—We quote as follows, viz: Southern Fultz $1.30@1.35½; do. long-berry $1.36@1.40; Western No. 2 red. spot $1.36½; do. do. do. April delivery $1.36½@1.37; do. do. do. May do. $1.35@1.35½; do. do. do. June do. $1.32@1.32½; do. do. do. July do $1.21@1.21½.

Corn.—We quote Southern white 60 cts; do. yellow 56@57; Western steamer, spot, 52½; do. mixed spot 54@54½; do. do. April 51½@52; do. do. May 49@49½.

Oats.—Market irregular and somewhat lower. We quote: Western mixed 41@42½ cts.; do. bright 43@45; do. white 46; Southern 45@46.

Rye.—We quote at 98 cts. for prime, and write the market quiet and nominal.

Seeds.—Clover we quote at 6@7 cts. for round lots common to prime, and ¼ to ½ a cent ₩ lb. higher for jobbing lots, with the offerings now light comparatively. Timothy is jobbing at $3.10 ₩ bus.

Hay and Straw.—Firm for each. We quote, viz: Choice Cecil county Timothy $19@20; fair to prime Md. and Pa. Timothy $16@18; Mixed Hay $15@17; Clover Hay $14@15; Wheat Straw $9@10; Oat do. $13; Rye do. $18@19.

Provisions.—We quote as follows, viz: Bulk Shoulders, packed, 5; do. L. C. Sides do. 7; do. C. R. Sides 7¼; Bacon Shoulders 5½; do. C. R. Sides 7¾; do. Hams, sugar-cured, 10½@11½; do. Shoulders do. 6½; do. Breasts 8¼; Lard, Refined, tierces, 8@8¼; do., do., tubs 8¼@8¾; Mess Pork, old, ₩ brl., $12.25; do. do., new, do. $12.50.

Butter.—Demand in excess of the supply, and the market very firm, all the arrivals finding prompt buyers at full rates. We quote as follows, viz: New York State, choice selections 33@35; do. do. do. dairies 28@30; Western creamery, choice 38@40; do. tubs, choice fresh 28@30; do. do., good to prime 25@28; Western Rolls, prime to choice 28@30; do. do. fair to good 23@25; Nearby receipts 25@26 cts.

Cheese.—We quote as follows, with the market steady, viz: Eastern choice, full cream 14¾@15; do. good to prime 14@14½; Western choice 13¾@14¾; do. good to prime 12¾@13¼ cts.

Eggs.—Fresh steady at 11 cts. ₩ dozen, and demand good.

Miscellaneous Produce.—Prices are as follows for the articles named below, viz: Apples, New York State, ₩ brl., $3.50@3.75; Beans, New York medium, ₩ bus., $1.50@1.55; Peas, black-eyed, ₩ bus., 70@75 cts.; Peas, Western green, ₩ bus., $1.80@1.85; Potatoes, Early Rose, ₩ bus., 55@60 cts.; do. Peerless do. 45@50 cts.; do. Sweet, new, ₩ brl., $2.50@3.25; Onions, Eastern ₩ brl. $3.75@4.50; Beeswax, ₩ lb. 21@22 cts.; Ginseng, ₩ lb. $1@1.10; Seneca Root, ₩ lb. 45@47 cts.; Virginia Snake, 20@25; Wool, unwashed, ₩ lb. 36@38; do., tubwashed, ₩ lb. 45@50; Hides, dry country, ₩ lb. 17@18; Sheep's Pelts, each 50@$1.50; Feathers, ₩ lb. 30@60; Broom Corn, Hurl ₩ lb. 5@7; Tallow, country, ₩ lb. 6 cts.

Cotton.—The demand is moderate and more or less uncertain, and the feeling closed weak. We quote: Middling 13@13¼ cts.; Low Middling 12¾; Strict Good Ordinary 12¾; Good Ordinary 12¼.

Tobacco.—Receipts of Maryland show considerable increase the past week. Market is active and firm. Ohio Virginia and Kentucky are in light stock here. Prices hold steady. We quote the range of prices as follows: Maryland—inferior and frosted $2.50@3.00; do. sound common $3.50; do. good $4.00@5.00; do. middling $6.00@8.00; do. good to fine red $8.50@10.00; do. fancy $11.00@15.00; do. ground leaves, new, $2.50@8.00. Virginia—common and good lugs $3.00@5.50; do. common and medium leaf $6.00@8.00; do. fair to good leaf $8.00@$10.00; do. selections $12@16; do. stems, common to fine, $1.50@2.00.

Live Stock.—*Beef Cattle*—The wholesale market was, in a few instances, a shade better than last week, but retail prices were a trifle off, and the market scarcely as active, buyers holding off for concessions, which they generally secured to a slight extent, on the middle grades at least. *Swine.*—Dealers report a fair supply and a moderate demand at 6@6¼ cts. ₩ lb. net. *Milch Cows.*—Trade is slow and prices unchanged. We quote at $30@$45 ₩ head as to quality. Prices ranged as follows: Best Beeves at $4.75@5.50; that generally rated first quality $4.00@4.75; medium or good fair quality $3.00@$3.75; extreme range of prices $3.00 a 5 50. Most of the sales were from $4.50 to $5.25 ₩ 100 lbs. *Sheep.*—The offerings are confined to supplying the wants of the home market only, and trade to-day is quite dull. We quote sheared Sheep at 4@5¼ cts., and woolled at 5@7 cts. ₩ lb. gross. Lambs at $3@4.50.

FOR SALE.

Jersey Cows, Heifers and Calves,

Of first-class milking stock and very handsome.

JAS. W. TYSON,

N. W. Cor. Charles and Lexington Sts.

TO CAPITALISTS!

Business Property For Sale.

The Property, N. E. Cor. Sharp and German Sts., Baltimore, about 44 feet on Sharp by 117 feet on German St. to a public alley in rear, with outlets to Baltimore and Sharp Sts., thus giving three fronts, and presenting unsurpassed facilities for business in the very heart of the wholesale trade of Baltimore, and of a section in which, during the past year, many of the largest and finest warehouses in the city have been erected, and one of the most valuable and available pieces of property likely soon to come into the market. There is a warehouse on the Sharp St. front of four stories, the upper ones reached separately by wide entrance and stairway. That on German street is two stories, with separate stairs to upper one. The first and second floors extend through the whole extent of the lot, and make fine show-rooms, well-lighted, and suited for any large business. The rear portion might be raised on present foundations and walls, if purchaser preferred thus to improve the property.

The present tenant's lease of 8¼ years expires in about a year, and I will sell at any time before its termination, at private sale. Its size, situation, and proximity to Baltimore street, gives this property a great advantage over most others in the vicinity.

THE FARM OF 150 ACRES, at 15-mile stone on York Turnpike road, Baltimore Co., (Md.) is still for sale. It would make an admirable dairy-farm. If not sold before the 1st of January next, will be for rent. See advertisement elsewhere.

Being about to RELINQUISH HOUSEKEEPING, I will also rent **DWELLING HOUSE** 268 Linden Avenue, near Townsend St.; one of the most desirable locations for a city residence. Possession June 1st or July 1st. The furniture will be rented with the house, if desired, or sold. If found suitable, the rent for three-fourths of the year might be taken out in board.

For further particulars of either of above properties, apply to

SAMUEL SANDS,
128 W. Baltimore St., Baltimore,
(*American Farmer* office.)

JAMES PENTLAND,

GREENMOUNT GARDENS,

(ESTABLISHED IN 1850.)

Opposite the Entrance to Greenmount Cemetery, BALTIMORE.

Keeps constantly on hand a choice assortment of healthy and well-grown PLANTS. ☞His stock of **VERBENAS, COLEUS,** and other Bedding Plants is extensive and in splendid condition. ☞**ROSES, CAMELLIAS AND GERANIUMS** in large assortment.

We have also a fine lot of **MAGNOLIA GRANDIFLORA** grown in pots, all the **NEW COLEUS,** quite a distinct type from the older varieties, together with a **GENERAL COLLECTION OF PLANTS** that may be found in a first-class establishment.

At our store, **ON CHARLES STREET, Cor. Saratoga,** in the Young Men's Christian Association Building, a collection of Plants and Flowers may always be found. Choice Bouquets, Funeral Designs, and designs for the decoration of rooms, tables, and for everything for which flowers are used, put up in the most artistic style of the art, at short notice and at charges that will compare favorably with any in the country.

COTTON-SEED MEAL.

STANDARD FOOD FOR CATTLE,

For sale by **A. L. BOGGS & CO.**

147 N. Howard Street, Baltimore.

KIEFFER'S HYBRID PEAR.

Believed to be exempt from blight.

A NEW ERA IN PEAR CULTURE.

This remarkable Pear was raised from the seed of a blight-proof Chinese Sand Pear, supposed to be crossed with Bartlett.

The original tree, now twelve years old, from seed, has not failed to give a good crop each year for seven years, yielding over seven bushels of fine fruit in 1879. Trees three years old, from bud, have borne specimens weighing eighteen ounces.

The *health*, vigor, beauty, early and annual bearing and productiveness of the tree, with the large size, good quality, fine form and beautiful color of the fruit makes this *the most valuable Pear* yet introduced. In season October and November.

ORDER OF OUR AGENTS

and you will get trees, true to name, delivered in good order.

See that our Name is at the head of the Order.

If you fail to see our Agents, address us:

R. G. CHASE & CO., GENEVA, N. Y.

—Branch Offices, Philadelphia and Boston.—

☞ See March number of AMERICAN FARMER for further description of Kieffer Pear.

We also offer a full line of general Nursery Stock, including Langford and Duchess of Oldenburg Apples, Queen of the Market and Gregg Raspberries, Brighton and Duchess Grape. ☜

AGENTS WANTED.

Energetic men with business capacity can easily acquire a knowledge of the business. Give age, previous occupation and reference. Address,

R. G. CHASE & CO.

Nurserymen, 10 N. Merrick St., Phila.

WORLD'S HIGHWAY TO FORTUNE HAPPINESS AND HEAVEN.

Large, 8vo., 700 pages, Illustrated. Sold only by agents. A Household Library of itself. Active, reliable and energetic agents wanted to whom best terms and exclusive territory will be given. Send for particulars at once to EVANS & COMP'Y, PUBLISHERS, No. 9 MURRAY STREET, NEW YORK.

This Powder has proven to be a most reliable preparation in all the ordinary diseases of **HORSES, CATTLE, SHEEP, SWINE and POULTRY.** It will keep the animal in a complete, thrifty, healthy condition, naturally producing to its full capacity without any injury to its system.

Your Cow is sure to yield an increase of milk and butter of at least 25 per cent. Your stock will fatten on one-fourth less feed.

Especially does this Powder show its good effect on **HOGS.** It has also been found a sure cure and preventative of **CHICKEN CHOLERA and HOG CHOLERA.** Price 25 cents per pack of 12 ounces. 5 packs $1.00. 1 dozen $3.00. A pamphlet with full particulars. Address,

F. A. MILLER,

SOLE PROPRIETOR,

No. 331 ARCH STREET, PHILADELPHIA.

N. B. My sales for the past six years have averaged 765 gross per year.

J. M. LAROQUE'S

ANTI-BILIOUS BITTERS

CURES

Dyspepsia, Nervousness, Bilious Attacks, Sick and Nervous Headache, Constipation of the Bowels, Kidney and Bladder Affections, Sour Stomach, Chills and Fevers, Female Diseases, All Bilious Affections, and is an Excellent Stomachic.

Is a purely vegetable faultless Family Medicine, for all diseases caused by a Deranged State of the Liver. It has been manufactured at Laroque's Pharmacy, Cor. Baltimore and Harrison Sts., for more than fifty years. Its efficacy in all forms of Liver diseases has been tested and approved by thousands who have used it successfully. The price also is within the reach of all, being 25 cts. for packages, and $1 for the liquid in bottles.

REGULATES

Torpid Liver, and cures all Diseases arising from a disordered stomach. Its use can be stopped at any time, without any bad effects. Always beneficial; never harmful. Be sure and get the genuine. Prepared at

Laroque's Pharmacy,

Cor. Baltimore and Harrison Sts., and having the signature of W. E. Thornton on the label.

W. E. THORNTON,

PROPRIETOR,

N. E. Cor. Baltimore and Harrison Sts., BALTIMORE, MD.

☞ **Sold by Druggists and Storekeepers Everywhere.** ☜

600,000 **PLANTS BY MAIL!** *A Nursery at your door.* Best new Raspberry and Strawberry Plants. *Early Prolific, Reliance, Cuthbert, Queen of the Market, Thwack* (red) *Florence* (yellow,) *Gregg,* (black,) **50c.** a dozen. *Sharpless, Miner's G. P., Glendale, Cinderella, Duchess, Continental, Crescent, Monarch, Pioneer, Seth Boyden, Forest Rose,* **30c.** a dozen. Purity and genuineness of plants and safe arrival guaranteed. Send for descriptive circular and list of lowest wholesale prices.
Address: **GIBSON & BENNETT,**
WOODBURY, N. J.

POOLE & HUNT, BALTIMORE
MANUFACTURERS OF
THE POOLE & HUNT LEFFEL TURBINE
WATER WHEELS,
MACHINE MOULDED
MILL GEARING,
SHAFTING, PULLEYS AND HANGERS.
STEAM ENGINES AND BOILERS,
MIXERS FOR FERTILIZERS AND CHEMICALS.

HIGH-BRED STOCK

28 Premiums at the Kent Co. (Md.) Fair and the Delaware State Fair, Dover, of 1879, on **Short-Horn Cattle, Berkshire Pigs, South-Down and Cotswold Sheep.** All ages for sale by
E. B. EMORY,
Centreville, Md.

Fruit and Ornamental TREES
Large Stock. Low Rates.
Standard Pear Trees a Specialty.
Send Stamp for Trade List. AGENTS WANTED.
E. MOODY & SONS, Lockport, N. Y.
NIAGARA NURSERIES. Established 1839.

LIGHT BRAHMAS and HOUDANS.

My **LIGHT BRAHMA** yard is headed by cock "Chief of Chestertown," [3255] purchased of J. K. Felch, mated with ten finely-marked hens and pullets.
HOUDANS.—My cockerel "Simon Pure" was sired by Grant's "Buffalo Delaware," 1st prize cockerel at Buffalo, N. Y., 1879, mated with nine hens and pullets. Eggs $3 per 13.
MARION deK. SMITH,
mh-3t *Chestertown, Kent Co., Md.*

EGGS.

Eggs for hatching of the following varieties, carefully packed and delivered to express upon receipt of prices named:
WHITE LEGHORN, 26 eggs.....$1 50
BROWN LEGHORN, 26 eggs..... 1 50
GOLDEN SPANGLED HAMBURG, 13 eggs..... 1 00
PEKIN DUCKS, 13 eggs..... 1 50
THOS. J. LEA,
BRIGHTON P. O.,
Feb. 20, 1880. *Montgomery Co., Md.*

THE
POULTRY WORLD,
A Large and Beautifully-Illustrated Monthly,
Exclusively Devoted to
Poultry, its Housing, Breeding & Management.

It gives the subject a thorough handling; is full of practical suggestions, descriptions of breeds, poultry buildings and fixtures, with original engravings by the most eminent artists in the United States and England. It treats of Poultry from the stand-point of Utility as well as Fancy. Its pages show how to hatch, feed and raise

CHICKENS AND FOWLS FOR PROFIT,
AND ALSO HOW TO
Surround Homes with Attractions in the Shape of Pets.

THE POULTRY WORLD was established to carry out in Journalism the great idea of Division of Labor, which is the "corner-stone of civilization." Every branch of Industry should be represented by a special publication. In this way the Germans are carrying every art and science toward the highest perfection, and in this country also special journals are multiplying. THE POULTRY WORLD is the organ of the Poultry interest, and is devoted to this alone. It is a

Complete Repository of Information

concerning the subject. Its editors are practical poultry-keepers, and its correspondents include the most eminent authorities in poultry matters.

Subscription, $1.25 a Year,
With 75 cents additional for 13 SUPERB FOWL CHROMOS annually, sent Post-paid.

WE ALSO ISSUE THE
AMERICAN POULTRY YARD,
AN ILLUSTATED WEEKLY,
In the Interests of Fanciers, Breeders, Farmers, Poulterers and Dealers.

☞ Fifty-two numbers of this Weekly mailed, post-paid, for $1.50, and each number handsomely illustrated. Though issued from the same office as the Monthly, the contents of the Weekly are entirely different from those of THE POULTRY WORLD. Or, THE POULTRY WORLD, monthly, and the POULTRY YARD, weekly, sent to same address, at the low price of $2.00 a year for both. Or, THE POULTRY YARD, POULTRY WORLD, and 13 elegant Chromos, each representing a standard breed of Fowls, for $2.75, all sent post-paid.

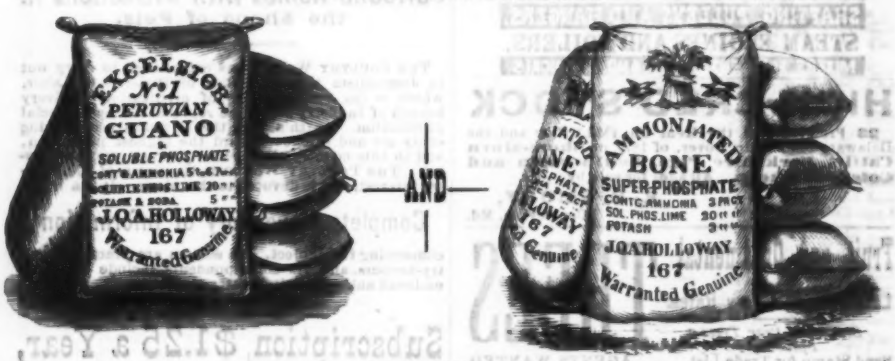
H. H. STODDARD,
Editor and Publisher, Hartford, Conn.

To Tobacco Planters.

The undersigned, PIONEER in the manufacture of Fertilizers in this city, and ORIGINATOR in 1858 of the Formulas and processes of manufacture of

"Excelsior" and Ammoniated Phosphate,

So well and favorably known by the Agricultural public, relying upon his experience and personal reputation hitherto acquired in the uniform excellence of these Fertilizers, as manufactured by him, continues to offer them to the Farmers and Planters of Maryland and Virginia, with the assurance that the high standard quality of each will be maintained as heretofore.



The above are the most concentrated FERTILIZERS ever offered to the farmers and planters—combining all the stimulating qualities of Peruvian Guano, and the ever-durable fertilizing properties of Bones, in fine, dry powder, prepared expressly for drilling,—and it is the universal opinion of the farmers and planters of Maryland and Virginia, after over twenty years experience in the use of the EXCELSIOR manufactured by me, that an application of 100 pounds is equal in its effects to 200 pounds of any other Fertilizer or Guano, therefore fully 50 per cent. cheaper.

With my present advantages and superior facilities for manufacturing, I challenge competition with any Fertilizer sold in the United States, in Quality, Mechanical Condition and Price.

By strictly adhering to my Original Formulas, using only the most concentrated materials, and superintending in person their manufacture—as for the past twenty years—

Uniform Quality is Guaranteed.

☞Farmers, to secure the ONLY GENUINE EXCELSIOR and PHOSPHATE, prepared according to my Original Formulas established in 1858, should see that every Bag is branded as above, with the ANALYSIS and MY NAME IN RED LETTERS.

J. Q. A. HOLLOWAY,

Originator and Manufacturer,

107 McElderry's Wharf, Baltimore, Md.

A BREECH-LOADING REPEATING RIFLE FOR $6.50. THE IMPROVED "CHICHESTER."

Weight from 5 to 8 Pounds. Length of Barrel 22 Inches.

The many readers of this Paper will no doubt remember, during the past six months, having seen our advertisement of the now celebrated **CHICHESTER RIFLE**, accompanied by flattering editorial notices in the New York "Tribune," "Atlas," "World," and other leading newspapers throughout the country. In response to a universal demand from all quarters, we decided to materially improve our rifle, and as now offered it is the most complete weapon of the kind in existence. The simple addition of PEEP and GLOBE SIGHTS (for which other manufacturers charge from $3 to $5) is worthy of special attention. Notwithstanding the immense advance in both metal and labor we shall offer the **CHICHESTER** with all the new improvements at the same proportionate RED ROCK price as before. WE DEFY COMPETITION from any of the monopolist high price manufacturers, and as the "New York Tribune" and other papers justly remarked, offer the best bargain in Fire-arms ever presented to the American people. These Rifles have been in course of active manufacture for over one year. The Patents which cover them being dated March 26th, 1871, May 27th, 1873. **CHICHESTER RIFLES** are WARRANTED and GUARANTEED *to be made of as fine material and in as thorough a manner in every respect as any fire-arm in the World.* Every part is made by special and expensive machinery, and in very large lots. Fire-arms, like Sewing Machines and Pianos, have always paid an *enormous profit* to the manufacturers; the actual cost being but a small part of the selling price. The **CHICHESTER** will never be sold at the immense profit asked by the manufacturers of other fire-arms, but only for the purpose of introduction will it be sold at the present price, and only for a limited time. We know this to be in the end the most effective and cheapest way to introduce any meritorious article. We GUARANTEE the **CHICHESTER** to be equal in MATERIAL and WORKMANSHIP to any Rifle in the World. *The best material only is used.* The barrels are 22 inches long, made of steel, and rifled in the most careful manner. The trimmings are all nickel-plated. Black Walnut Stock and very handsomely designed hard-rubber pistol grip. Adjustable PEEP and GLOBE Sights, case-hardened hammer and trigger, and the *best of steel* locks. **BEAR IN MIND** this is no old-fashioned paper cartridge army gun, 11g bored and clumsy, nor small revolver with cheap wood stock. It is a BRAN NEW **REPEATER**, using regular Metallic Cartridges of 32, 22 and 38 calibre, which are sold everywhere. **FIRES SEVEN TIMES** with one loading, and is very ACCURATE and EFFECTIVE at both *short* and *long* distances. It can be loaded in fifteen seconds, and every shot discharged in ten seconds if necessary. Can be used as a single shot rifle if desired. Every one is shot and thoroughly tested before leaving the factory. *Every one is numbered* and a WARRANT *is given for each, signed by the Company.* We have targets made with the **CHICHESTER** at mid range, that cannot be beaten. Each one is packed separately in a neat case, with cleaning rod, &c., and sent to any address on receipt of price. We will get *special rates* from the Express Companies and can guarantee that the Express Charges will not amount to over 50 or 75 cents to most parts of the country. We cannot of course send by mail,

WE WILL SEND ONE CHICHESTER SEVEN SHOT REPEATING RIFLE as described above, to any address for **$6.50**, carefully boxed, and when cash accompanies order, will give FREE a box of long range rifle Metallic Cartridges. The Office of the CHICHESTER RIFLE CO. is in Jersey City, N. J., near terminus of the Pennsylvania Rail Road, and within one block of the Ferries (ten minutes' sail from New York City.) If you have acquaintances in New York or vicinity, ask them to step into our salesrooms and examine the CHICHESTER RIFLES, and Targets made with them at long and short range, and read testimonials received from well-known sportsmen.

☞ For our responsibility we refer to the principal Banks and Express Companies of Jersey City. In ordering send Money by Registered Letter, Post Office Money Order, Draft on New York, or, if preferred, forward to any Express Agents in Jersey City, with instructions to pay money to us on *delivery* of the Rifle. Make all Checks and Money Orders payable to **CHICHESTER RIFLE CO.**, W. N. PITCHETT, Treasurer, 311 Montgomery Street, Jersey City, New Jersey, U. S. A.

Incorporated under Laws of the State of New Jer—

LAND PLASTER!

Ground from the **MARD** (Windsor Rock, which is 20 per cent. richer in the essential element, Sulphate of Lime, than the soft Plaster (which is used by all mills East.) Send for circular.

WM. WIRT CHARKE,
Manufacturer, Agent for American and Foreign Guano and Plaster, 211 E. Bay Street, Baltimore.

FOR SALE!

R. C. Leghorn Cockerels, (C. F. Starr's Strain.)
EGGS in season from following stock:
Rose C. W. Leghorns, $3 per 13.
Plymouth Rocks, $3 " 13. (C. F. Starr's strain.)
Pekin Ducks, $3 " 9 (Pearl Stoddard strain.)
$2 " 9 (Palmer strain.)

Sam'l T. Earle, M. D.
Centreville, Queen Anne's Co., Md.

EGGS FOR SALE! EGGS FOR SALE!

I will ship eggs from my Pure-Bred Poultry at the following prices:

Brown Leghorn, (Bonney Strain, per clutch of 13,) $1.00; Plymouth Rock, (Upham do. do. do.,) $1.00. "*Mixed Eggs*" from P. R., B. L., L. B., P. C. and W. L. Pullets, crossed by B. L. & P. R. Cockerels, at 50 cts. per clutch of 13.

Eggs packed in light baskets and delivered free of charge at the railroad office. All orders to be accompanied by cash. Order early, as I shall ship in rotation as the orders are received. Address,

S. A. SWEENY, Freeland P. O., Md.
Baltimore Co., March 22, 1880.

BEST IN THE WORLD.

COMMON-SENSE CHAIRS and ROCKERS.

With or without Reading and Writing Table. A lady purchaser writes: "*Our only objection to your Common-Sense Rocker is*, WE ALL WANT IT. "'*I love it, I love it, and who shall dare to chide me for loving the Common-Sense Chair.*'"

☞ STRONG, EASY AND ROOMY. FITS EVERYWHERE. Send stamp for list to

P. A. SINCLAIR,
Mottville, Onandago Co., New York.

☞ Every Chair stamped and WARRANTED PERFECT.

VEGETABLE PLANTS.

EARLY AND LATE CELERY,

Early Cabbage, Tomato, Egg Plants, Pepper and Sweet Potato Plants of Choicest Varieties,

BY THE DOZEN, HUNDRED, THOUSAND OR TENS OF THOUSANDS.

Having consented to act as agent for the largest grower of VEGETABLE PLANTS on the Eastern Shore, I will take orders for Plants of any kind and guarantee them true and from the best seed in the country. All Plants will be packed in damp moss, and delivered at the wharf of the Chester River Steamboat Co., Light Street, Baltimore, without extra charge. For circulars, with full prices, &c., address

W. F. MASSEY, Towsontown, Md.

1880. PURE-BRED POULTRY. 1880.

EGGS

MONTVUE POULTRY YARDS,

EGGS

BROOKLANDVILLE, MD. G. O. BROWN, Proprietor.

I will spare a limited number of Eggs from my choice breeds, consisting of LIGHT BRAHMAS, HOUDANS, PLYMOUTH ROCKS, LEGHORNS, BLACK RED GAMES, P. COCHINS, SULTANS, HAMBURGS, DOMINIQUES, NARRAGANSETT TURKEYS AND BANTAMS.

My fowls have always won wherever exhibited. I send Eggs from same fowls I breed my best show-birds from. Send stamp for circulars. A few Leghorns for sale.

PERUVIAN GUANO!

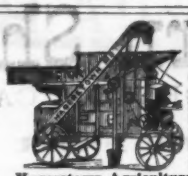
The undersigned, agent for the sale of **PERUVIAN GUANO**, imported into the United States by Messrs. W. R. Grace & Co., New York, agents for the consignees of the Peruvian Government, having just received per ships "Cashmere," "St. Lucie" and "Mystic Belle," a full supply direct from the best Guano deposits, containing 10 per cent. Ammonia, offers it for sale, delivered from the Government Storehouses, Waters' Wharf.

J. Q. A. HOLLOWAY, 107 McElderry's Wharf, BALTIMORE, MD.

HOPE FOR THE DEAF

Garmore's Artificial Ear Drums

PERFECTLY RESTORE THE HEARING and perform the work of the **Natural Drum.** Always in position, **but invisible to others.** All Conversation and even whispers heard distinctly. We **refer to those using them.** Send for descriptive circular.
GARMORE EAR DRUM CO., CINCINNATI, O.



THE VICTOR
Double Huller
Clover Machine

Is the *only kind* that has ever hulled **100** bushels of seed in one day from damp and wet straw. Send for Descriptive Circular and Price List, which contains many letters confirming this.
Hagerstown Agricultural Implement Mfg. Co.
State where you saw Advertisement. Hagerstown, Md.

McGINNIS HARROW.

From Mr. J. D. Guthrie, of Shelby county, Ky., State Grange Purchasing Agent, and famous grower of Long-Wooled Sheep.

SHELBYVILLE, Ky., May 6th, 1878.

MESSRS. M'GINNIS, TAYLOR & HOLDERBY:

GENTLEMEN—In reply to your request for my opinion, I take pleasure in saying the M'Ginnis Harrow has given universal satisfaction.

It pulverizes deeply, and its smoothing capacity is equal to any Harrow I have ever tried.

It stands unrivaled for destroying the toughest sods with its knife-like teeth, perfectly reducing the sod with two harrowings, presenting a thorough seed-bed for any kind of grain or seed.

Its draft is much lighter than the ordinary Harrow.

It is equal to the Thomas Harrow in lightness of draft, while it possesses decided advantages over the Thomas in DEEP PULVERIZATION, STRENGTH AND DURABILITY.

I have said thus much from observation of its working on the field.

While the Thomas Harrow is better adapted for the shallow covering necessary for very small seeds, for general purposes I think the M'Ginnis Patent IS WITHOUT A RIVAL.

Yours truly, J. D. GUTHRIE.

GILPIN'S VEGETABLE LIVER PILLS

Are prepared, with great care, from medical plants, are *coated with sugar* that they may be taken by the smallest child and upon the most delicate stomach; are intended especially to act upon the Liver—thereby relieving all such diseases as COSTIVENESS, HEADACHE, PARALYSIS, DYSPEPSIA, COLDS, JAUNDICE, and all diseases of a Bilious origin. No better evidence can be offered in favor of these Pills than the very fact that where their ingredients are known to family physicians, they are using them in their private practice. We append the following from one of our most prominent physicians:

OAKLAND, June 28, 1869.

DR. GILPIN—After carefully examining the formula of your Sugar-Coated Pills, I feel it but justice to say, that the combination is certainly perfect, and comprises the only remedies I ever believed were the proper ones to be used in diseases of a bilious origin. I shall take pleasure in recommending them not only to my patients, but the entire medical profession. Yours truly, J. M. WISTAR, M. D.

From one of the leading retail druggists of West Virginia:

WESTON, W. VA., June 18, 1869.

MESSRS. CANBY, GILPIN & CO.—Gents: Please send by express twelve dozen Gilpin's Vegetable Liver Pills. I have the most flattering accounts from all who have used them, and believe the day is not far distant when they will supersede all others. Yours, F. M. CHALFANT.

We could fill several pages with certificates, &c., from prominent men throughout the country, but prefer to let the Pills in the future, as they have in the past, rest entirely on their own merits—knowing that wherever they are known their use will pass down from generation to generation.

GILPIN'S VEGETABLE LIVER PILLS are sold by all respectable Druggists and Country Storekeepers throughout the United States and Canadas.

Principal Depot: CANBY, GILPIN & CO., Baltimore.

1855 **BAUGH & SONS,** 1880

PHILADELPHIA, PA., AND BALTIMORE, MD.,

Manufacturers and Importers of

Pure Dissolved Animal Bones, Ground Raw Bones, Acid Phosphate, Bone Meal, High-Grade Chemicals,

And other Supplies for the Manufacture of HOME-MADE FERTILIZERS.

LOWEST CASH PRICES FOR GOODS OF GUARANTEED STANDARD.

SULPHATE OF AMMONIA (Full Strength, 25 Per Cent.) A SPECIALTY.

We will fill orders for Chemicals to make Home-Made Fertilizers by any formula our customers desire to follow, and we will take pleasure in furnishing estimates of cost on application.

BAUGH & SONS,

No. 20 S. Delaware Ave., Philadelphia. No. 103 South St., Baltimore.

☞ **Send for Prices and All Desired Information.** ☜

Eastern Shore Nurseries,

DENTON, CAROLINE CO. MD.

PRICES FOR SPRING OF 1880.

A superior lot of **Apple Trees**, winter varieties, for Maryland and Virginia, a specialty. Trees 5 to 7 feet at $10 per 100. A large supply also of Red Astrachan and Early Harvest—the two leading early summer market varieties. **Standard Pear Trees**, very fine 5 to 7 feet, at $30 per 100. An immense stock of **Concord Grape Vines** at greatly reduced prices, viz: 3 years old, strong, $8 per 500 or $15 per 1,000; two years old, selected, $7 per 500 or $12.50 per 1,000; 1 year old, selected, $5 per 500 or $10 per 1,000. A large stock of Osage Orange Plants for hedging. One-year old plants selected at $2.50 per 1,000, 1st class, or $1.50 for 2d class. Also, Shade and Evergreen Trees at very low rates. Correspondence solicited. Price-Lists of all kinds of nursery stock free to applicants.

J. W. KERR, Proprietor.

COULSON'S
Pure Ground Bone,

STRICTLY PURE

BONE MEAL.

☞Liberal Inducements offered Farmers and others at the Mill, Jenkins Lane, North of Greenmount Cemetery.

EDW'D L. COULSON,

Office, 100 W. Lombard St., Baltimore.

LEE'S

Prepared Agricultural

Prepared Expressly for Each and Every Crop.

Try it alongside of your pet Manure and note its effect. ☞SEND FOR CIRCULARS, WITH TESTIMONIALS.

ONLY $15 PER TON—16 BAGS.

L. J. WARREN,

Agent for the Manufacturer. 18 E. Falls Avenue, BALTIMORE.

Also Lime, Hair, Brick, Cement and Plasters.

LIME

Clairmont and Furley Hall Nursery,

ESTABLISHED 1828.

The largest stock and greatest variety of fruit and ornamental trees, foreign and domestic, to be found in the United States,—comprising apple, peach and pear trees, (standard and dwarf) evergreen and shade trees; all varieties of grape vines, currant, gooseberry, and blackberry bushes, strawberry plants, etc., etc.

TERMS TO SUIT THE TIMES.

Nursery is located on the Bel-Air Road, Baltimore County, and can be reached by way of Gay street.

WM. CORSE & SONS,

P. O. Box 248, BALTIMORE, MD.

My Annual Catalogue of Vegetable and Flower Seed for 1880, rich in engravings from photographs of the originals, will be sent FREE to all who apply. My old customers need not write for it. I offer one of the largest collections of vegetable seed ever sent out by any Seed House in America, a large portion of which were grown on my six seed farms. *Full directions for cultivation on each package.* All seed *warranted to be both fresh and true to name*; so far, that should it prove otherwise, *I will refill the order gratis.* The original introducer of the Hubbard Squash, Phinney's Melon, Marblehead Cabbages, Mexican Corn, and scores of other vegetables. I invite the patronage of *all who are anxious to have their seed directly from the grower, fresh, true and of the very best strain.*

NEW VEGETABLES A SPECIALTY.

JAMES J. H. GREGORY, Marblehead, Mass.

John Saul's

CATALOGUE OF

New, Rare and Beautiful Plants

Will be ready in February, with a colored plate.

It is full in really good and beautiful Plants. New Dracenas—Goldeana, Princess Margaret, Fredericii, &c. New Crotons—Hamburganus, Earl of Derby, Williamsii, &c. A fine collection of East Indian and other Orchids, &c. New French and English Roses. A set of beautiful new Coleus. New Pelargoniums, new Oleanders, new Tuberous Begonias, new Dipledenas, new Loras, Fuchsias, Dahlias, Chrysanthemums, &c.

ROSES.

An immense stock of all the new and standard varieties grown in pots on own roots—CHEAP.

Fruit and Ornamental Trees.

New PEARS, new PEACHES, with a large stock of Pear, Apple, Peach, Plum, Cherries, (standards and dwarfs,) Grape Vines, Small Fruits, &c.

ORNAMENTAL TREES, in great variety, for Parks, Lawns, Gardens, &c. EVERGREENS of all sizes, of best quality and at the lowest rates. VEGETABLE SEEDS of the finest quality, fresh and pure, grown by myself or especially for me, or my importation.

FLOWER SEEDS.—Being extensively engaged in importing and growing new and rare plants, consequently my facilities for seed-saving are unequalled.

The following Catalogues, with others, now ready. Mailed Free:

No. 1.—A descriptive Catalogue of Fruit Trees.

No. 2.—A Catalogue of Garden, Agricultural and Flower Seed.

No. 5.—Descriptive Catalogue of a selection of Roses.

No. 6.—A Catalogue of New, Rare and Beautiful Plants, with a colored plate, free to customers; to others, 10 cents. A plain copy to all applicants free.

JOHN SAUL, Washington, D. C.

TREES ROSES SHRUBS

The largest and most Complete Stock of Fruit and Ornamental Trees in the U. S. Priced Catalogues sent as follows: No. 1, Fruits, (new ed.) with plate, 15 cts.; plain, 10 cts. **No. 2,** Ornamental Trees, etc., (new ed.) with plate, 25 cts.; plain, 15 cts. **No. 3,** Greenhouse, **Free. No. 4,** Wholesale, **Free,** and **No. 5,** Catalogue of Roses, with beautiful plate of New and Rare Roses, 10 cts.; plain, **Free. No. 7,** Catalogue of Strawberries, with plate, **Free.** Address,

ELLWANGER & BARRY, Rochester, N.Y.

A. RIGGS,

Proprietor of Model Herd of

Poland-China Swine

OF THE

BLACK BEAUTY STRAIN.

Illustrated Circular sent upon application to

B. C. PLATT,

Business Manager,

Suffield, Conn.

Fruit and Ornamental

TREES

Large Stock. Low Rates.

Standard Pear Trees a Specialty.

Send Stamp for Trade List. AGENTS WANTED.

E. MOODY & SONS, Lockport, N. Y.

NIAGARA NURSERIES. Established 1839.

WILBOR'S COMPOUND OF

PURE COD LIVER OIL AND LIME.

To One and All.—Are you suffering from a Cough, Cold, Asthma, Bronchitis, or any of the various pulmonary troubles that so often end in Consumption? If so, use "*Wilbor's Pure Cod-Liver Oil and Lime,*" a safe and sure remedy. This is no quack preparation, but is regularly prescribed by the medical faculty. Manufactured only by A. B. WILBOR, Chemist, Boston. Sold by all druggists.

A LIVE PAPER.

Send 10 cts. to **H. L. Hastings, 47 Cornhill, Boston,** for **3 months'** subscription, for the **best** paper in the country—**16** large pages; four distinct papers: unsectarian, anti-infidel, anti-rum and anti-devil; 2 full-page pictures; no puffs or advertisements. MR. Spurgeon said: **"The best paper that comes to me."** D. L. Moody said: **"About the best paper in the country."** **$1** per year. **Agents Wanted.** Good pay for ministers, workers, canvassers and agents.

LUMBER.

Thomas Matthews & Son,

88 N. High St. and Cor. Canton Ave. and Albemarle St., Baltimore.

☞ WHITE PINE and YELLOW PINE **LUMBER** FOR BUILDING.

ROUGH AND DRESSED **LUMBER.**

☞ HARDWOOD FOR WHEELWRIGHTS and CABINET-MAKERS. SHINGLES, LATHS, PALES, ETC., at LOWEST PRICES. au

GEO. F. SLOAN & BRO.

—LUMBER—

DOORS, SASH, BRICKS, &c.

IN LOTS TO SUIT,

132 Light-St. Wharf, Baltimore.

CRIFFITH & TURNER,

MANUFACTURERS OF AND DEALERS IN

Agricultural Implements and Machinery,

Garden and Field Seeds, Fertilizers, &c.

41 and 43 N. Paca Street, BALTIMORE.

Premium Maryland Cutter

For HAY, STRAW and FODDER, (of their own manufacture,)

Of all sizes for hand or horse power. These Cutters excel in capacity, strength and durability.

ALSO,

CORN SHELLERS, for Hand and Horse Power,

Including the most approved patterns; CHOPPING MILLS, CORN AND COB CRUSHERS, LARD PRESSES, SAUSAGE CUTTERS and STUFFERS, for Butchers and Family use.

Farm Wagons, Pumps, Churns, Butter Workers.

THE OLIVER CHILLED PLOW,

A new departure and great improvement over all other Plows, embracing new principles, which place it far in advance of all other Plows. It has superseded all others wherever tried in competition. Over 300,000 now in use. Warranted to do good work; scour in any soil; run lighter than any Plow in use; run steady with one, two or three horses, and not choke or corrode; work well in dry or hard ground, and give good satisfaction.

☞ PATENT STEEL BARBED FENCE WIRE—Does not rust, stain or decay. A complete barrier to unruly stock. The most durable and cheapest fence. STEEL AND CAST-IRON PLOWS, PLOW CASTINGS, with a general assortment of Agricultural Implements and Farmers' and Gardeners' Tools of all kinds. Repairing done at shortest notice. ☞ SEND FOR DESCRIPTIVE CIRCULARS.

Berkshires!

I am prepared to furnish PIGS of the best blood at the following prices, boxed and delivered to express:

SINGLE PIG. $6.
PAIR, $10.
TRIO, $13.

THOS. J. LEA,

Brighton P. O., Montgomery County, Md.

BERKSHIRE PIGS

FOR SALE.

On account of want of room to properly accommodate them during the winter, I offer a few animals of all ages *at greatly reduced prices, if promptly applied for.*

A record of thirty premiums (the true test of merit) won this season, in many hotly-contested rings, in some of which were the first prize and sweepstakes winners at the Canadian, Illinois and St. Louis shows, is sufficient (without further remark) to prove the high quality of my stock. Correspondence solicited before purchasing elsewhere. Representations and safe delivery guaranteed. I have also **Bronze Turkeys** for sale.

ALEX. M. FULFORD,
BEL AIR, MD.

THE SOUTH ILLUSTRATED.

Pronounced by the press the best book of the kind ever issued. Containing 117 Pages, 50 Fine Engravings and Letters from well-known gentlemen, North and South, showing how Northern settlers are received.

THE SOUTH FOR INVALIDS!

The South for Farmers!

EVERY NORTHERN MAN SHOULD READ IT CAREFULLY.

Descriptions of Plantations for Sale.

50 VIEWS OF SOUTHERN SCENERY.

Every Southern Man should have it.

Mailed, postpaid, for four 3-cent Stamps. Address,

GEO. H. CHAPIN,
PUBLISHER,
257 Washington St., Boston, Mass.

John Saul,

WASHINGTON, D. C.

Was awarded the following PREMIUMS at the Cincinnati Industrial Exposition, Sept., 1879:

First Premium—"Best Group of Crotons."
First Premium—"Best Single Specimen of Croton."
First Premium—"Best Group of Dracænas."
First Premium—"Best Group of Marantas."
First Premium—"Best Single Specimen of Maranta."
First Premium—"Best single specimen of Dieffenbachia.
Second Premium—"Second Best Group of Variegated Foliage Plants."
First Premium—"Best Single Specimen of Variegated Foliage Plants."
Special Premium—"For Davallia Mooreana."

The only Southern Rake and Drill Factory in the Country.

These cuts represent our 20 Steel-Tooth Horse Rake, with Iron Hubs (or Locust Hubs boiled in oil)—9,000 in use—and our Positive Force-Feed Grain, Seed, and Fertilizing Drill (which can be changed to sow any quantity while Drill is in motion), with Pin or Spring Hoes—8,277 in use and giving satisfaction. All manufacturers say theirs are the best. All we ask is, send for *Descriptive Circular and Price-List*, which contains letters from persons using them. All are *warranted*.

HAGERSTOWN AGRICULTURAL IMPLEMENT MFG. CO.
Hagerstown, Maryland.

Farm in Baltimore Co. For Sale,

Or Exchange for City Property.

Containing 150 acres; about 25 to 30 acres in thriving timber, principally oak and chestnut; it is well watered and admirably adapted to a dairy or market farm; the soil is very kind and susceptible of the highest improvement; it is now principally set in grass. It is at the 15-mile stone on the York turnpike, fronting on both sides of the road, and five stations on the Northern Central R. R. can be reached at distances of 1 to 3 miles, by good county roads. This is the circle of the members of the Gunpowder Club, and is undoubtedly one of the best locations in the county. Churches, of all denominations, and schools, public and private, are convenient. The York turnpike is one of the very best, and the distance from the city permits a round-trip a day, for wagoning. Probably no healthier spot in the world can be found. It is laid off in fields of 12 to 15 acres, to most of which easy access is had to water for stock. The dwelling, which is commodious, and large barn, are of stone, with other outhouses, though old, yet can be made very comfortable at a reasonable expense; and there are several admirable sites for residences on the premises. This property could be advantageously divided into small lots and sold at a very great advance on the price asked for the whole. Lots on the road have brought as high as $500 an acre, and the extent of the frontage on the turnpike, in the hands of an enterprising man, could be turned to excellent account, but the present owner is indisposed to take the trouble requisite to accomplish this, and would prefer selling the whole together. A gentleman with a very small income independent of the farm, could live on this place without labor, saving the rent of a city residence, by renting the fields on shares to be farmed under his control, reserving a garden and stabling, and the pasturage necessary for his stock. A small tenant's house on the premises would rent for the amount of taxes on the place. As I cannot occupy the place myself, I am willing to sell it on the most reasonable terms, or exchange it for city property in a good locality. For further particulars apply to the subscriber, at office of *American Farmer*, or 208 Linden Avenue, Baltimore. **SAML. SANDS.**

White Leghorns.

As Layers, the WHITE LEGHORNS have few superiors, and are strictly **non-Sitters.** Can furnish them at **$3 per trio,** boxed and delivered to railroad.

THOS. J. LEA.

Brighton P. O., Montgomery Co., Md.

IMPERIAL WINE VINEGAR.
NONPAREIL CIDER VINEGAR.

Strictly pure and reliable. Many imitations, costing 3 cents a gallon, are sold as Cider Vinegar. To guard against deception observe that packages bear our brands. Fresh APOLINARIS WATER.

FREDK. M. BOLLMAN, Importer,
63 S. GAY STREET.

JOHN DUER & SONS

24 South Charles Street,
BALTIMORE, MD.

New and Beautiful Designs—Best Quality

SLATE MANTELS

AT REDUCED PRICES.

JOHN DUER & SONS.

DEVON CATTLE, SOUTHDOWN, LEICESTER AND MERINO SHEEP. POLAND-CHINA, BERKSHIRE and ESSEX HOGS A SPECIALTY.

All bred from the most noted and fashionable strains of Prize-Winning Stock.

I took first premiums in their classes on Devon Cattle, Leicester and Merino Sheep, Poland-China and Essex Hogs, at Virginia State Fair in 1875 and 1876, besides a large number of Prizes taken at Piedmont and Lynchburg Fairs.

Address, F. W. CHILES,
Tolersville, C. & O. R. R., Va.

ESTABLISHED 1849.

HORNER'S

CONCENTRATED

SUPER-PHOSPHATE

FOR ALL CROPS.

It is made of the best and most concentrated materials, possesses all the virtues of PERUVIAN GUANO and BONE-DUST combined, and is well adapted to Wheat, Corn, Oats, &c., producing abundant crops where all others fail. Having a large percentage of Soluble and Precipitated **Phosphoric Acid and Ammonia,** it is without doubt **the richest Commercial Fertilizer in the country.**

HORNER'S

BONE-DUST

Made only of Slaughter-house Bones, contains a larger percentage of AMMONIA and BONE PHOSPHATE LIME than any other brand in the market.

WE OFFER

One Thousand Dollars!

For the Detection of any Impurity in our Manufacture of Bone.

We do not steam or bake our Bones, or otherwise treat them so as to destroy the animal matter, which is rich in ammonia.

The Best Article in the Market

HORNER'S

Super-Phosphate of Lime

—OR—

DISSOLVED BONE,

MADE OF PURE SLAUGHTER-HOUSE BONES

It is richer in Soluble Phosphoric Acid and Ammonia than any similar article in the market.

CHEMICALS

And other materials for making

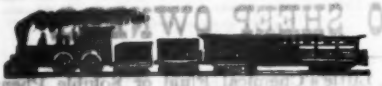
Home Fertilizers

Muriate Potash, Kainit,
Sulphate Soda, Plaster,
Peruvian Guano, Oil Vitriol,
Nitrate Soda, Dried Blood,
Dissolved South Carolina,
Dissolved Raw Bone, &c., &c.

A full supply of PURE Materials always on hand and for sale at lowest market rates.

Write or call before buying elsewhere.

Joshua Horner, Jr., & Co.
OR. BOWLY'S WHARF AND WOOD STREET,
BALTIMORE, MD.



PENNSYLVANIA ROUTE,

FORMED BY THE

NORTHERN CENTRAL

AND

PENNSYLVANIA RAILROADS

ON THE

West, Northwest and Southwest,

To PITTSBURG, CINCINNATI,
LOUISVILLE, INDIANAPOLIS,
CHICAGO, ST. LOUIS,

AND ALL OTHER

PROMINENT POINTS.

BALTIMORE & POTOMAC

AND

Alexandria & Fredericksburg Railways

ON THE SOUTH TO

Washington, Richmond,

AND ALL POINTS IN THE

Atlantic and Gulf States.

THE ONLY

ALL RAIL LINE

WITH NO

OMNIBUS TRANSFER AT WASHINGTON.

NORTHERN CENTRAL

AND

PHILADELPHIA and ERIE RAILWAYS

ON THE NORTH TO

HARRISBURG, WILLIAMSPORT, ELMIRA,
WATKINS GLEN, ROCHESTER, ERIE
BUFFALO, NIAGARA FALLS.

☞ Baggage called for and checked at Hotels and private residences through to destination. Sleeping and Parlor Car accommodations secured.

Through tickets sold and information given at company's office,

N. E. Corner Baltimore and Calvert Streets.

At Depot N. C. Railway,

UNION DEPOT, CHARLES STREET STATION

And PENNSYLVANIA AVENUE STATION.

FRANK THOMSON,
General Manager.

L. P. FARMER,
Gen'l Passenger Ag't,
Penns. and N. C. R. R.

Patent Selenitic Cement.

New Berne, N. C., Feb. 18, 1869.

MR. WM. WIRT CLARKE, Baltimore, Md.:

Dear Sir—I have just completed a large cistern with the **Selenitic Cement**, and it gives *perfect satisfaction*.

Yours truly,

L. H. CUTLER.

A. G. MOTT,

AGRICULTURAL IMPLEMENT

And Seed Warehouse,

40 ENSOR STREET

NEAR BELAIR MARKET,

BALTIMORE, MD.

Sole Agent for the great BELLE CITY FEED CUTTER. "Boss of the World," for Fodder, Hay and Straw. Cuts 4 lengths, from ½ to 2 inches. Will cut one ton in 30 minutes. SEND FOR CIRCULAR.

PRATT'S ASTRAL OIL

WILL NOT EXPLODE.

Wholesale and Retail.

LAMPS OF EVERY DESCRIPTION,

For Sale by W. & H. SPILCKER,

Agents for Chas. Pratt & Co. New York. 136 Baltimore St.

c-4m

JERSEY

COWS, HEIFERS, and CALVES.

All Herd-Book Animals.

For sale by

W. H. PEROT,

25 S. Gay Street, Baltimore.

FILSTON FARM

FOR SALE—A few Herd-Registered **AYRSHIRE BULL CALVES.**

D. A. CONN, Manager,

Glencoe P. O., Baltimore, Md.

The Ensilage of Maize,

And OTHER GREEN FODDER CROPS

By M. AUGUSTE GOFFART.

Translated by J. B. Brown, with a history of the Art in Maryland by Francis Morris, Esq.

Illustrated by plans of Silos, &c.; a portrait of M. Goffart, &c.

Price, neatly bound in cloth, **$1.00.** Sent by mail, postpaid.

American Farmer Office,

BALTIMORE, MD.

VERY IMPORTANT TO SHEEP OWNERS.

The new (patented) Sheep Dip, Little's Chemical Fluid or Soluble Phenyle. Non-poisonous. Non-corrosive. Will not injure even the eyes of the Sheep. Kills Red Lice, Ticks, Scab Insects, also Ants, Bed-Bugs, and Fleas on dogs. Cures Gapes in chickens. Improves growth and quality of wool. The first prize for wool given in London in June last, was awarded to wool from sheep that had been dipped in this Fluid. Advantage over other Dips is that it mixes perfectly with *cold* water, and is not unsafe to use in cold weather. 1 gallon of the Fluid makes 100 gallons ready for dipping. 13,000 gallons have just been ordered for California. This Fluid is invaluable as a Deodorizer, Disinfectant, Antiseptic and valuable Therapeutic agent, and is used in many London Hospitals. If once tried in a sick-room, no family would be without it. For sale by the principal druggists. Send stamp for Prospectus and Testimonials to **T. W. LAWFORD,** (General Agent,) Baltimore, Md., to whom application should be made for large quantities or in bulk, or 25 cents for a sample.

DEVON CATTLE
AND SHROPSHIRE SHEEP.

FOR SALE—Thoroughbred young **Devon Bulls** and young **Rams** of the Shropshire breed; several of the young bulls were sired by the IMPORTED BULL MASTER JAMES, the winner of several prizes in England; amongst others the first prize given to his class at the show of the Royal Agricultural Society of England, held at Birmingham in July, 1876. The young Rams were all sired by IMPORTED Rams, purchased at high figures, from one of the very best flocks in England, and several of them are out of Ewes recently imported from the same flock as the Rams, the others being out of **Ewes** obtained from the celebrated flock of Mr. T. Conyer, of Waldberg, near Haverstraw, in the State of New York. The young Bulls offered for sale are by MASTER JAMES, the sire of the Grand Prize Bull LORD NEWSHAM, and MASTER JAMES himself gained first prize of his class at the Birmingham show of the Royal Agricultural Society of England in 1876. Particulars as to pedigrees, prices, &c., may be obtained by applying to

WILLIAM U. KENNON,

Sabot Island P. O., Goochland County, Virginia.

PRICE & HEALD,
HARDWOOD, CABINET AND BUILDING
LUMBER,
SASH, DOOR FRAMES, BLINDS, &C.

Office and Yard, Corner Pratt and Exeter Sts.,

BRANCH YARD, BLOCK STREET, ADJOINING DRAW BRIDGE.

BALTIMORE, MD.

JNO. S. REESE & CO.

GENERAL AGENTS

Pacific Guano Co.

No. 10 SOUTH STREET, BALTIMORE.

Branch—1326 Cary Street, Richmond.

VICK'S Illustrated FLORAL GUIDE

A beautiful work of **100 Pages, One Colored Flower Plate and 500 Illustrations,** with Descriptions of the best Flowers and Vegetables, and how to grow them. All for a FIVE-CENT STAMP. In English or German.

VICK'S SEEDS are the best in the world. FIVE CENTS for postage will buy the FLORAL GUIDE, telling how to get them.

The **Flower and Vegetable Garden,** 175 Pages, Six Colored Plates, and many hundred Engravings. For 50 cents in paper covers; $1.00 in elegant cloth. In German or English. Address,

JAMES VICK, Rochester, N. Y.

ELVIRA GRAPE-VINES

AND

All the Leading Varieties at Low Rates.

STRAWBERRIES.—SHARPLESS SEEDLING and other varieties.

RASPBERRIES, BLACKBERRIES, &c.

ROSES, BEDDING PLANTS, &c.

15,000 square feet of glass devoted to flowers.

Orders will be promptly attended to if left at my store, No. 91 N. Charles St., Baltimore, or addressed to

JOHN COOK,

Carroll P. O., Baltimore Co., Md.

PLANTS GROWN

for transplanting, and Fruit for the market.

100 Acres Planted with Berries **100**

Varieties of Selected Fruits

See New Catalogue for what sorts to plant. *Sent free.*

JOHN S. COLLINS, Moorestown, N. Jersey.

BALTIMORE VETERINARY INFIRMARY

152 Saratoga Street,

Between Howard and Eutaw, BALTIMORE, MD.

D. LEMAY, Veterinary Surgeon, Graduate of the Montreal Veterinary College, Canada, having recently established a Pharmacy and Infirmary at the above-mentioned locality, is enabled, through long experience and thorough knowledge of the science of the profession, to offer his services to the public with confidence. All calls or orders through post or telegraph for sickness in horses, cattle, &c., promptly answered. Operations successfully performed.

TERMS MODERATE.

ROCHESTER TREES COMMERCIAL NURSERIES

Hardy Trees, Shrubs, Vines and Plants, per dozen, 100 and 1,000. New Spring PRICE-LIST now ready, and sent FREE to all applicants. ORNAMENTAL CATALOGUE [Illustrated] 10 cents. Fruit Catalogue 5 cents. Both free to customers. Fine, thrifty stock and low prices. Address, W. S. LITTLE, Rochester, N. Y.

Will be mailed FREE to all applicants, and to customers without ordering it. It contains four colored plates, 600 engravings, about 200 pages, and full descriptions, prices and directions for planting 1500 varieties of Vegetable and Flower Seeds, Plants, Roses, etc. Invaluable to all. Send for it. Address,

D. M. FERRY & CO., Detroit, Mich.

32 Pages, a Colored Plate in every number and many fine Engravings. Price $1.25 a year; Five Copies for $5.00. Specimen numbers sent for 10 cents; 3 trial copies for 25 cents. Address,

JAMES VICK, Rochester, N. Y.

FANCIER'S AGENCY,

62 Cortlandt St., N. Y.

Keeps constantly on hand, or will import to order, all varieties of Pheasants, Poultry, Pigeons, Pet-Stock, and other animals. Ground Bone, Oyster Shell, and Beef Scraps, by the package, barrel, or ton. Stone Drinking Fountains, Artificial Mothers, and all kinds of Poultry Appliances. Also

"Eureka Roup Pills, (O. S. Keene's,) The only sure and speedy cure of that scourge of the poultry-yard, Roup and its kindred diseases.

As a preventive and cure for Gapes it has no equal, and for Pigeons "going light" it has been used with flattering success. Price 50 cents per box, post-paid. Agents wanted in the territory named above. Send for circulars containing testimonials, &c. **J. C. Long, Jr., & Co.**

ORGAN BEATTY PIANO

New ORGANS $35 Stops, 3 set Golden Tongue Reeds, 5 Octs., 5 Knee Swells, Walnut Case, warn't'd 6 years, Stool & Book $90. New Pianos, Stool, Cover & Book, $143 to $855. Before you buy be sure to write me. Illustrated Newspaper sent Free. Address DANL. F. BEATTY, Washington, New Jersey.

VIRGINIA LANDS.

UPPER JAMES REAL ESTATE AGENCY

BY WILLIAM HOLMAN,

CARTERSVILLE, Va.

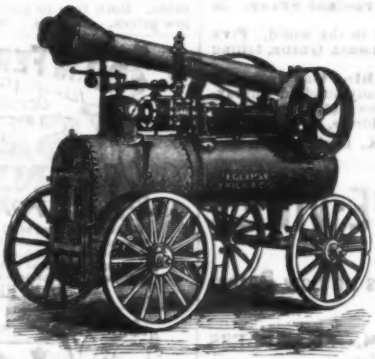
Who offers for sale upwards of 12,000 acres of land, lying in one of the most desirable regions of Eastern Virginia.

Catalogues sent on application. my-tf

JOSHUA THOMAS,

Steam, Agricultural and Mill Machinery

ECLIPSE Agricultural ENGINE.



Best, Cheapest, and most Economical Engine in the Market.

FIRST PREMIUM WHEREVER EXHIBITED.

Buffalo Pitts Thresher and Cleaner,

The old Standard, and still ahead of all competitors.

Kirby and Wheeler Mowers and Reapers,

OSBORNE SELF-BINDING HARVESTER.

☞ A full line of Harvesting Machines, adapted to the wants and taste of Farmers any and everywhere. ☜

Buckeye Grain and Fertilizer Drill,
Star, Victor, and Ilion Horse Rakes,
Circular Saw Mills,
Portable Grist Mills,
Millstones, Smut Machines, Bolting Cloths,
Mill Picks, Leather and Gum Belting,
Cucumber-Wood Pumps,
Buckeye Force Pump,
The Watt and Ball Plows, &c., &c.

Prices and Descriptive Circulars furnished on application, and correspondence solicited from all wanting anything in my line.

OFFICE AND WAREHOUSE:

No. 53 LIGHT STREET,

BALTIMORE, MD.

BUILDERS' SUPPLIES.

Doors, Sash, Blinds, Mouldings,

STAIR WORK, BRACKETS,

And every necessity for the complete finishing or adorning of Buildings, at LOWEST POSSIBLE PRICE.

CALL OR ADDRESS

HUTCHENS & CURTIS,

Cor. Pratt and Commerce Sts., BALTIMORE.

D. B. FOSTER & SON,

Plumbers, Steam and Gas Fitters,

No. 39 Clay Street, BALTIMORE.

☞ DOUBLE AND SINGLE-ACTION FORCING PUMPS, BATH TUBS, WATER CLOSETS, COOKING RANGES, HOT-AIR FURNACES, HYDRANTS, LEAD and IRON PIPE, SHEET LEAD, &c., &c. **Ranges of every description repaired and put in order.** PROMPT ATTENTION TO JOBBING. ☞ COUNTRY WORK A SPECIALTY.

Established] **A. E. WARNER,** **[1811.**

Manufacturer of

Silver Ware & Rich Jewelry,

English, Swiss and American WATCHES of the Best Makers; Importer and Dealer in Diamonds, Fine Watches, Silver-Plated Ware, Table Cutlery, &c.

WEDDING PRESENTS,

Premiums for Agricultural Fairs, Fine Bronzes, Opera Glasses and Shell Jewelry, &c.

All of which is offered at GREATLY REDUCED PRICES.

je-1y **No. 135 W. Baltimore Street, near Calvert, Baltimore.**

GEORGE O. STEVENS,

WINDOW SASHES, BLINDS & DOORS

49

LIGHT STREET,

BALTIMORE.

KEEP IN STOCK AND FURNISH TO ORDER:

Window Sashes, Doors, Blinds, Mouldings, Brackets, Hand Railings, Balusters, Newel Posts, Bracket Shelves, Barge Boards, Window Caps, Door Caps, Pews and Church Work, Blind Hinges, Builders' Hardware, Wood Mantels, Window Frames, Door Frames, Paints, Oil, Putty, Glass, Lumber, Bricks, Lime, Sash Weights, Sash Cord, Porch Columns, Tree Boxes.

THE BEST WORK AT LOWEST PRICES.

J. C. VALIANT & CO.

Paper Hangings & Window Shades,

Upholstering and Curtain Decorations,

WINDOW AWNINGS, MOSQUITO NETS, CORNICES, &c.

Orders by mail promptly attended to. Samples freely sent, and first-class workmen sent to all parts of the country.

183 MADISON AVENUE,

(Between Orchard and Biddle Streets.) BALTIMORE, MD.

Rosebank Nurseries,

GOVANSTOWN, BALTIMORE COUNTY, MD.

ORNAMENTAL AND FRUIT TREES, FLOWERING SHRUBS, AND HERBACEOUS PLANTS.

We invite the attention of the public to our select stock of the following: **STANDARD** and **DWARF PEARS**,—2, 3 and 4 years old. **APPLES**—Standard and Dwarf. **CHERRIES**—Standard and Dwarf. **APRICOTS, CRAB APPLES, MULBERRIES, GRAPE VINES**, of the most popular kinds, together with other small fruits.

Our **COLLECTIONS** of **ORNAMENTAL** Trees and Shrubs are large, and embrace most of the rarest sorts.

ROSES on their own roots, with the newest of **BEDDING-OUT** plants by the dozen or 1,000, for which we have issued a separate Catalogue.

SPECIAL.—60,000 one and two-year old OSAGE ORANGE plants for hedges.

CATALOGUES FORWARDED ON APPLICATION. ORDERS BY MAIL PROMPTLY ATTENDED TO. ALL GOODS DELIVERED IN BALTIMORE FREE OF CHARGE.

W. D. BRACKENRIDGE.

TO FARMERS AND PLANTERS.

R. J. BAKER & CO.

36 and 38 S. Charles Street,

FACTORY AT LOCUST POINT, BALTIMORE, MD.

MANUFACTURERS AND DEALERS IN

PURE GROUND RAWBONE, SULPHATE OF LIME, SULPHATE OF AMMONIA, NITRATE OF SODA, SULPHATE OF SODA, MURIATE AND SULPHATE OF POTASH AND GROUND PLASTER.

All PURE Chemicals for mixtures, compounds of formulas for fertilizer mixtures, as low as any house for cash. Write for prices.

—WRITE TO—

A. P. OR M. B. ROWE,

CO-OPERATIVE STOCK FARM & POULTRY YARDS,

FREDERICKSBURG, VA.,

For Herd-Book Jersey or Ayrshire Cattle, bred from stock selected in person from best Northern breeders and from "Centennial" Stock Exhibition. Cotswold, Leicester, Shropshire and Southdown Sheep, all bred from best imported stock, and Lambs of each breed for sale in August. Herd-Record Berkshire Swine of best strains, and Essex surpassed by none. Poultry—Choice, well-marked young fowls from all of our varieties will be for sale this fall. Orders for eggs from all classes have closed, except Leghorns. We will continue to fill orders for Leghorn eggs, of either the brown or white variety, at $1.50 per dozen. More premiums have been awarded to our stock at the Virginia State Fairs than that of any other exhibitor in the State. And we would refer all to the whole community in which we live and where our Senior has resided for more than half a century, and particularly to all those whom we have supplied with stock, both North and South,—as we always endeavor to make our stock our best advertisement, and guarantee satisfaction.

Entered at the post-office at Baltimore as second-class mail.

SLINGLUFF & CO.'S

Chesapeake Chemical Works.

OFFICE, 155 W. Fayette Street. } BALTIMORE. { WORKS, Foot of Leadenhall St.

MANUFACTURERS AND MANIPULATORS OF

PHOSPHATES

We are now offering to the Trade the following WELL-KNOWN BRANDS OF GOODS, which we guarantee fully up to Standard:

SLINGLUFF'S

DISSOLVED GROUND BONE,

Containing 3 per cent. of Ammonia.

SLINGLUFF'S

Dissolved South American Bone Ash

Containing 40 to 44 per cent. Soluble Bone Phosphate.

SLINGLUFF'S

Dissolved South Carolina Phosphate

Containing 28 to 32 per cent. Soluble Bone Phosphate.

To meet the demand for a high-grade Fertilizer, we are offering **SLINGLUFF'S NATIVE SUPER-PHOSPHATE**—prepared entirely from Animal Bone—highly ammoniated.

Also, **SLINGLUFF'S No. 1 AMMONIATED SUPER-PHOSPHATE.** This we can confidently recommend as one of the best fertilizers sold in the market at a low price.

R. W. L. RASIN & CO.

MANUFACTURERS OF

Chemical Fertilizers

—) FOR (—

Cotton, Tobacco, Corn, Oats, Wheat, &c.

Works, SOUTH BALTIMORE.

Where they have introduced the MOST COMPLETE MACHINERY for compounding Concentrated Fertilizers, that their great experience has enabled them to so successfully introduce to the Planters of the Middle and Southern States.

SOLUBLE SEA ISLAND GUANO

So well-known and of UNDOUBTED EXCELLENCE.

EMPIRE GUANO

A High-Grade Fertilizer of KNOWN MERIT.

Dissolved Bone Phosphate

Prepared from GROUND ANIMAL BONES.

ACIDULATED SOUTH CAROLINA and NAVASSA PHOSPHATES

AMMONIATED ALKALINE PHOSPHATE,

A complete manure, endorsed by the Patrons, who have used it with great satisfaction for the last 5 years, and is on sale by Grange Agents at Baltimore, Richmond, Norfolk, Petersburg and Alexandria.

RAW and STEAMED BONES, POTASH SALTS,

And all Fertilizing Materials in Store and for Sale.

SPECIAL COMPOUNDS PREPARED ON ORDERS.

R. W. L. RASIN & CO.

S. W. Cor. SOUTH and WATER STREETS, BALTIMORE.